

# THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

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## Educational News and Editorial Comment

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### THE GROWTH OF VOCATIONAL EDUCATION

IN THE December number of *School Life* almost twelve full pages are devoted to a description of the development and the status of vocational education in the United States. A striking feature of the article is a graph showing the rapid increase in "enrolments in all schools operated under state plans, including federally aided and non-federally aided," from 1918 to 1937, the period during which federal aid has been available. The increase of enrolment for "all types" was from 164,183 to 1,496,837—almost a million and a half persons. The increase has been rapid and steady except for the two-year interval 1932-34, at the depth of the depression. Data were not yet at hand for 1938, but the article predicts that "the figures for all the states will show a total enrolment for the year of close to two million." The following excerpt reports the increase in enrolments in each of the main fields: agriculture, home economics, and trade and industry.

The growth in the vocational-education program as measured by the steadily progressive increase in enrolment from year to year may be shown in another way—that is, by a comparison of the growth figures in the different fields of vocational education.

For example, the number of persons enrolled in vocational education in agriculture at the end of the fiscal year 1918 was 15,450 as compared with more than 394,000 for the year 1937. In the same period, also, the number of agricultural

schools grew from 609 to 12,431; the number of teachers of agriculture from 895 to 7,076; the number of institutions training vocational-agriculture teachers, from 40 to 102; the number of teacher trainers in these institutions from 116 to 146; and the number of students enrolled in these teacher-training institutions from 1,534 to 5,823.

The enrolment in vocational classes in home economics has grown from 30,799 to 496,225; the number of home-economics schools or departments from 323 to 5,357; the number of teachers from 1,086 to 7,287; the number of home-economics teacher-training institutions from 60 to 129; and the number of students enrolled in these teacher-training institutions from 3,319 to 8,359.

Similarly, the growth of the vocational-training program in the trade and industrial field may be told statistically. In the same period enrolments in schools or classes in this field increased from 117,934 to 606,212; the number of teachers from 3,276 to 15,664; the number of teacher-training institutions from 45 to 94; and the number of students enrolled in these institutions from 1,091 to 9,196.

However unsatisfactory enrolment figures may be in measuring advances in the vocational-education program carried on in secondary schools, they may surely be taken as a more or less authentic indication of the popularity and value of the program.

A significant fact which emerges from a study of the records is the consistency with which the enrolment in vocational education has increased each year since the federally aided program was started.

This rapid growth makes timely the appraisal of the whole program by a disinterested agency, the President's Advisory Committee on Education. In all probability the report of this committee, which has been prepared by Professor John Dale Russell of the University of Chicago, will be published before this note finds its way into print. The *School Review* plans comment on the report in some early issue.

#### A NATIONAL OCCUPATIONAL INFORMATION AND GUIDANCE SERVICE

RECENT months have seen articles and announcements descriptive of a new occupational information and guidance service being developed in the United States Office of Education. The first move toward the service was taken almost a year ago when Richard D. Allen, well known in the field of guidance and responsible for the notable guidance program in operation in Providence, Rhode Island, was appointed as part-time consultant to the commissioner of education and to the persons directly responsible for the administration

of the service. In the words of Commissioner Studebaker, given in a recent issue of *Occupations*, "The appointment of Dr. Allen was preliminary to the organization of a rather complete service to be supported in part by funds made available by increased appropriations for vocational education from the Seventy-fifth Congress and in part by funds from the general appropriations for the Office." Policies and plans for the service were mapped out after consultation with a number of persons expert in the field of guidance. Responsibility for administering the policies has been delegated to J. C. Wright, assistant commissioner for vocational education in the Office of Education.

The proposed development of the service is announced to follow three main lines. The first is "the collation and dissemination of information about occupations." The second and the third concern, respectively, "a permanent, cumulative inventory of the individual who is to pursue one of these occupations" and "the promotion throughout the nation of the consciousness of the need of occupational information and general guidance as an integral part of school programs." The emphasis is to be on occupational information in guidance, an emphasis long overdue in connection with the development of vocational education under federal legislation and subsidy.

Announcements indicate that the organization of guidance in a state will be supported by funds and other assets which may be made available to the state and that the form of organization, the functions, and the methods of administration are all matters which are to be determined by state authorities.

CHARLES H. THURBER, EARLY EDITOR  
OF THE "SCHOOL REVIEW"

THE death on December 9 of Dr. Charles H. Thurber, at the age of seventy-four years, is reported in *School and Society*. During the major portion of Dr. Thurber's professional career, the period from 1900 to 1932, he served as editor of the publishing house of Ginn and Company. He was a member of the firm for twenty-eight years. A previous editorial connection had been with the *School Review*. Title-pages of this journal indicate the first editor to have been Jacob Gould Schurman, at the time president of Cornell University, where the *School Review* was first published. Late in 1893

Dr. Thurber, then principal of Colgate Academy, became joint editor with President Schurman, and the periodical was published at Colgate University Press. Some time during 1895 Dr. Thurber took over the entire editorship. In 1896 he came to the University of Chicago, bringing the journal with him. Even from those earliest years the subtitle of the *School Review* was "A Journal of Secondary Education."

According to *School and Society*, this early editor of the *School Review* was professor of education from 1893 to 1895 at Colgate University. At the University of Chicago he was associate professor of pedagogy. It is a matter of considerable interest to the field that these professorships were among the first appointments to university positions in education.

#### HERE AND THERE AMONG THE HIGH SCHOOLS

LARGELY by coincidence, all the innovations in our "Here and There" for the month bear in some significant way on community relations. The items have to do with reports to parents about pupils, arrangements for miscellaneous employment for pupils, a parents' page in the school paper, and pupils' and parents' co-operation in curriculum revision.

##### *Efforts toward improvement of reports to parents*

In the Thomas Jefferson High School of Council Bluffs, Iowa, of which R. F. Myers is principal, a project is under way looking toward the improvement of reports to parents. The forms on which reports are made are called "Personalanalysis Cards." According to Stephen J. Field, instructor of biology in the school, who has provided materials descriptive of the plan, dissatisfaction of the principal and the faculty with the traditional type of report card led to development of a type of report that (1) stresses the values of citizenship rather than marks, (2) takes account of individual differences and does not discourage slow pupils, (3) provides for special appraisal of skills and attitudes desired within the different departments of the school, and (4) allows the teacher to comment in an informal manner on the personal growth of pupils and the need of remedial work. A "summary of the case against the traditional report card," submitted with the description of the project, points



out that old-type marks "develop an antisocial feeling of superiority and inferiority among pupils," "are unfair in a world of individuals of varying abilities," "create an antagonistic attitude toward the subject and teacher," "become a club used by the poor teacher," and "encourage a superficial type of scholarship and rote learning" rather than motivating pupils in more desirable ways.

Samples of the cards used in seven departments, namely, English, social studies, science, mathematics, business, industrial education, and music, were included with the exposition of the plan, and description of the makeup of one of these, that used for English, should help to an understanding of the scheme. On the face of the card, below space for entries of pupil's name, course, period, and teacher's name, appears the following list of respects in which the pupil is rated: "Effort," "Attendance," "Attitude (general)," "Participation in class discussion," "Voice control," "Punctuation," "Spelling," "Grammar and sentence structure," "Choice of reading material," "Appreciation of reading," "Amount of valuable reading," "Written work," and "Oral reports." Provision is made for ratings on each of these respects for each period of six weeks in the semester, the ratings being indicated as "satisfactory" or "unsatisfactory." The backs of the cards for English, social studies, and business include space for comments by teacher and parent for each six-week period. Other cards are somewhat differently organized on the back, but all provide space for parents' signatures. Instructor Field states that reports in marks have been eliminated except at the end of the semester.

The plan is now in process of careful appraisal, and we assume that the results of this appraisal will be made generally available.

Reports to parents of pupils in the Senior High School at Springfield, Missouri, of which J. D. Hull is principal, have also undergone modification by abandonment of traditional marks and the substitution of ratings of "S" (satisfactory) and "U" (unsatisfactory). The ratings are made in each quarter of the school year for "Growth in" four important respects, namely, "Intelligent self-direction," "Knowledge and skills," "Social adjustment," and "Work habits." The same categories are used for all the "Learning areas," each learning area which a given pupil may be taking being stamped or written on his card. Thus only a single card is used.

Following the explanation of the ratings on the back of the card is the further comment: "This card tells nothing about the pupil's native ability. Parents are invited to call at the school and receive any evidence available there on the aptitude of pupils. Especially should this evidence be secured by parents of pupils who have already made definite vocational or college plans."

Accompanying the card received from Principal Hull is a statement indicating that the pupil's ability is judged by percentile ranks on three named tests: a silent-reading test, a quick-scoring mental test, and a standard psychological test. Says this statement further, "For guidance purposes there will be recorded on each pupil's permanent record a decile rank in each subject on one standard achievement test and a decile rank in each subject on an achievement test constructed by local teachers."

*"Odd-jobs department" in the schools of one system* In Knoxville, Tennessee, each junior and senior high school, with the aid of the vocational counselors, has created an "odd-jobs department." Citizens are invited to send to the schools for pupils who can help type letters, do miscellaneous office-work, read to elderly people, care for children while parents are away, attend convalescents, do sewing or housekeeping, assist in entertaining, distribute circulars, run errands, etc. In one school, Oakwood, a "Boys' Better Business Club" has been organized, the members of which are alert in finding odd jobs for earning money. During heavy snows, for example, they earn money shoveling snow from sidewalks. They have formed this group to earn money for various purposes, one of which is to set aside the earnings for college.

*A regular "parents' page" in the high-school paper* The bi-weekly paper issued by the William Horlick High School, a senior high school of Racine, Wisconsin, of which D. W. Miller is principal, maintains a regular "parents' page." Illustrative of items of special interest to parents, which have appeared on this page in recent issues of the *Horlick Herald*, are "New Text-book System Wins Much Praise," "Superintendent Giese Has Plans To Change Promotion System of City Schools," and "Music Department Asks for More Band Instruments." B. E. Kline is faculty "editorial adviser" on the *Herald*.

*The community shares in  
revising the curriculum*

In Shaker Heights, a suburb of Cleveland, Ohio, curriculum revision is being undertaken which involves co-operation of pupils, parents, and teachers. We quote from the Cleveland *Plain Dealer's* report of one of the first meetings, held early in December. A letter from Superintendent Loomis states that the remaining meetings will be held in the evening so that fathers may attend. In commenting editorially on this plan as it bears on the processes of democracy, the *Plain Dealer* said that "such a plan should arm students mentally and politically with an arsenal of facts for the defense of popular government."

Shaker Heights parents, pupils, and teachers joined yesterday in the initial attack on the problem of what to do to meet educational needs cited by pupils as the most important outside of regular school subjects.

Meeting at Shaker Heights Junior High School, the three groups, totaling more than 350, assembled for the blessing of Principal Russell H. Rupp, chairman of the committee which for the last year has conducted the investigation, and of Superintendent A. K. Loomis, guiding spirit of the whole move to attune the school system's curriculum more exactly to the needs of pupils.

Then, to gain the widest expression of opinion, the audience split into twenty discussion groups, in which members will meet for the next four months to consider phases of the problem. The committees combined equal representations of lower- and upper-grade teachers, pupil leaders, and parents. In the proceedings which followed, sixth-grade pupils had equal voice with their elders.

A new report on the adequacy of present school treatment of the twenty listed needs guided the groups in their discussions. In it the fifteen hundred school children and parents who participated in the survey listed the following five "needs" as those most inadequately met:

"We should be able to render first aid in cases of emergency. Reported inadequate by 55.7 per cent.

"We should possess a fair understanding of the importance and functions of sex. Reported inadequate by 48 per cent.

"We should appreciate the value of money and be able to budget an income to meet current living standards. Reported inadequate by 47.1 per cent.

"We should have a clear knowledge of the various occupations and their opportunities in order to make wise selections. Reported inadequate by 45.1 per cent.

"We should understand the human body and its care. Reported inadequate by 40.2 per cent."

The five needs judged by the greatest number as being met adequately in the schools involved training of civic attitudes, 72.8 per cent adequate; participation in sports or hobbies, 70.4 per cent; development of mental and moral quali-

ties which encourage leadership and co-operation, 69 per cent; appreciation of traffic rules, 64.8 per cent; and acquisition of characteristics enabling the pupils to get along with other people, 64.5 per cent.

Parents and others in the discussion groups were agreed that the needs should be supplied in the schools, but whether to provide for them in courses now offered or in new courses was a point of difference.

The fact that the present curriculum is overcrowded also presented a complication, since to offer new courses some of the present ones would have to be dropped.

#### THE HIGH-SCHOOL PRINCIPALSHIP IN TRANSITION

A PROGRAM "designed to enlarge its scope and service" is announced by the *High School Journal*, published by the Department of Education at the University of North Carolina. It has a new editor, Roben J. Maaske, professor of education in the University, an "advisory editorial board" of six members, and an "editorial board" of seventeen members. Among "successive steps" taken toward realization of the program mentioned are a "special publication program which will make available to readers pertinent articles" by prominent specialists in various fields of secondary education, by principals and teachers, and by members of the enlarged editorial board; "the addition of several new features such as the inclusion of educational news notes, pertinent editorials, abstracts of research studies, and special bibliographies"; and an active program for making the *Journal* "available to a larger number of high-school principals, teachers, superintendents, other professional workers, and leading libraries throughout the country."

Included with the articles in the December issue is one on the "Changing Concept of the High-School Principalship" by Harl R. Douglass, who not long ago shifted from the University of Minnesota to the position of head of the Department of Education at the University of North Carolina. We can find space to quote portions only of an article which merits reading in full—portions dealing chiefly with "The High-School Principal of the Past" and "The New High-School Principal."

#### THE HIGH-SCHOOL PRINCIPAL OF THE PAST

Unfortunately the typical high-school principal of the past was not only as poorly trained in these areas of thought as the typical teacher, but he was inclined to cling fearfully and blindly to the *status quo*. Perhaps by nature some-

what timid and conservative and perhaps made more so as the result of the method of his appointment and the uncertainty of tenure, the principal, unlike the physician, has been somewhat slack in bringing pressure upon the public to follow his trained leadership. He has instead tended to give the people the kind of schools they want. The outcome of this attitude has been to keep the school like the one the parents attended; to subordinate the school program almost entirely to the direct and individual benefits of those being educated; to avoid all areas of controversial matters, especially if urged to do so by influential individuals or groups; and to be relatively indifferent to the real needs of American democracy.

This condition constitutes a most appealing challenge to the more masculine and the more courageous, as well as to those of the clearest vision, the highest ideals, and the most sincere and intellectual patriotism. Fortunately there is a growing trend to transform the high-school principal from a narrowly-read schoolmaster into an educator who thinks and acts as broadly as do those of other occupations. There is now a tendency for him to become a leader in the practical affairs of the state and the nation as well as in strictly classroom problems.

#### THE NEW HIGH-SCHOOL PRINCIPAL

Business and professional men exhibit a puzzled and mixed reaction to this new type of high-school principal, for they seem to have felt that social, economic, and political affairs are problems with which "schoolmarms," male and female, are not likely to be familiar and in which they are not interested. Along with the feelings of surprise, and of suspicion, are also mingled an increased admiration for this Jekyll-Hyde man, this combination school teacher and regular man. It will take many lay leaders some time to assimilate, and to fully appreciate, this tendency of the high-school principal to outgrow his inferiority complex and its concomitant servility and to employ his superior mental endowment in nonacademic fields of human affairs. But therein lies a challenge to the principal.

These new developments and the increased scope and variety of the responsibilities and opportunities of the high-school principal demand a much broader preparation, both before entering his profession and while in service. Prior to 1915 it was the exceptional administrator who had any professional training other than that ordinarily possessed by the classroom teacher. Since that time a gradually increasing percentage of secondary-school principals have spent an extra year in professional study. In the United States as a whole the median number of years of education beyond the high school for high-school principals is approximately 4.8 years. At present principals of schools accredited by the Southern Association of Colleges and Secondary Schools must have a Master's degree. The time is at hand when five years of training should be the prerequisite for an administrator's certificate in every state. The character of the training should be designated in part, including among other things training in supervision, guidance techniques, course-of-study construction, school administration, statistics, and measurement. But since the high school today is not

only one of our most important social institutions, but is the chief agency for giving direction and acceleration to social progress, training of a purely professional character is not enough. It is fully as important that the men in charge of this institution understand the world for which the school attempts to prepare its pupils. . . .

#### SUGGESTIONS FOR KEEPING ABREAST OF THE JOB

The typical professional training for teaching and for the principalship alone does not offer adequate preparation for the "statesman" educator. Broad reading on social, economic, and scientific problems and developments, local, national, and international, is essential for the educational administrator who desires a clear perspective of the world for which the school prepares its youth. He must take time to read and ponder on the writings of authoritative and stimulating writers in many fields of human thought and endeavor. Books and magazine articles on current problems, events, and trends should be part of his regular reading diet.

For fear that he will become so engrossed in the detail of managing his school that he will fail to keep informed about his world, he should make definite provision for reading at least one or two current books a month. In order that he may understand all viewpoints, he should read both a conservative and a progressive, liberal, or radical newspaper, if one can be found in his region; at least two weekly periodicals, one of which is liberal, progressive, or radical, such as the *Nation* and the *New Republic*; and at least two monthly periodicals such as *Harpers*, *Scribners*, the *Atlantic Monthly*, and the *Reader's Digest*. . . .

#### A CHALLENGE

So the high-school principalship has become a real job for a big man—a man of unusual professional ability and training, and a man "big" and broad in his social and cultural interests and understandings. The principalship is truly a most responsible undertaking which should not be taken as lightly and as superficially as is the case with the thousands of petty individuals who today delight in hearing themselves called "the principal."

#### CURRICULUM AND INSTRUCTION IN PAPER COVERS

NUMEROUS paper-covered publications concerned with a wide variety of matters within the field of curriculum and instruction have found their way to the editor's office in recent weeks, and several of them are of sufficient merit to warrant special mention.

*A yearbook on utilizing community resources* The Ninth Yearbook of the National Council for the Social Studies has been edited by Miss Ruth West, of the Lewis and Clark High School of Spokane, Washington, and deals with the



timely subject, *Utilization of Community Resources in the Social Studies*. The titles of the parts suggest the nature of the treatment: "Education for Democratic Living," "The Teacher and the Community," "Some Techniques of Community Study," "Special Phases of Community Study," "Education through Community Participation," "The World at Home," "Community Study in Other Countries," and "Testing for Community Information." Articles under these headings are diverse in character and provide practical help on questions of both the theory and the means. Many illustrations of practice are reported.

*Methods and materials in education for safety* A Research Bulletin of the National Education Association (November, 1938), entitled *Safety Education through Schools*, is a compendium on this important subject. The Introduction is followed by chapters with the headings: "Current School Practices in Safety Education," "Methods of Safety Teaching," "Sources of Instructional Materials," "Necessary Improvements in the Teaching of Safety in the Schools," "Problems That Lie Ahead," "Where Safety Education Aids May Be Obtained," and "Reviews of Safety Films and Slides." The following excerpt from the Introduction does not overstate the value of the publication.

Teachers find it necessary to exercise a great deal of caution and restraint in attempting to teach a subject like safety in which results are measured in terms of life and death. In view of such results it is of prime importance that teachers be informed of trends in safety teaching, and it is in this respect that this bulletin should be of service in the classroom. Through this study, teachers may learn what some of their colleagues are accomplishing in the field of safety; what methods seem to be most effective; which types of teaching appear to be good and which harmful; and what results are obtained. Furthermore, the opinions of classroom teachers concerning future development of safety programs should be of value since it is usually the teacher who is in a position to observe most accurately the needs of instruction. The urgent need for such information as this bulletin presents and the desire for teacher-guidance in the field of safety are evident in the reports of the teachers who participated in this survey.

This bulletin should be of particular interest to school administrators. The facts and recommendations contained herein indicate the need for important administrative and supervisory measures. The lists of organizations in the field of safety, of local and state courses of study, and of motion pictures should be of special benefit to curriculum committees having difficulty in obtaining good instructional aids for their reports.



*Reports on curriculum of the Eight-Year Study of the Progressive Education Association* comprise the entire issue of November 16 of the *Educational Research Bulletin* (published at Ohio State University). The issue opens with a general statement by the director, W. M. Aikin, concerning the organization and the activities of the Commission on the Relation of School and College, under the auspices of which the Eight-Year Study is being conducted. This statement is followed by articles on special aspects of the Study: "Development of Core Curriculums," by Harold B. Alberty; "Social Studies," by S. P. McCutchen; "Travels of a Curriculum Associate among the Secondary Schools [of the Study]," by H. H. Giles; and "Experimental Work and Progress in the Field of Science," by A. N. Zechiel. Persons desirous of keeping in touch with the Eight-Year Study will be well served by reading the entire issue.

*National trends in secondary-school subjects* A new bulletin of the United States Office of Education (Bulletin No. 6, 1938), by Carl A. Jessen and Lester B. Herlihy, is entitled *Offerings and Registrations in High-School Subjects, 1933-34*. The bulletin reports information concerning offerings and registrations not only for 1933-34, the last year for which the evidence is available, but also at four-year intervals beginning with 1890. The numbers and the percentages of enrolments provide a reliable portrayal of curriculum trends over the whole period. The tabular evidence and the text are the same as were used in articles in several issues of *School Life* published over a period of several months, each article being concerned with a group of related subjects. The *School Review* made generous quotations from several of these articles as they appeared. One misses in the bulletin the illuminating graphs depicting the trends in each subject and field.

Although not the most important information in the bulletin, the reports on less common offerings ("reported in fewer than fifteen states") are significant and interesting. The foreign languages in this list of subjects are Bohemian, Czechoslovakian, Danish, Greek, Hawaiian (reported only for Hawaii), Hebrew, Italian, Norse, Polish, and Swedish. Among "other subjects" in the same table are history of mathematics, slide rule, surveying, agricultural economics, bacteriology, gold-assaying, photography, civil service, Hebrew his-

tory, negro history, Pan-Pacific relations, aeronautics, beauty culture, broom-making, forestry and nursery, upholstery, etymology, orientation, and reviews. The bulletin is priced at fifteen cents by the Superintendent of Documents in Washington, D.C.

*The high-school program of studies in Pittsburgh* From the Pittsburgh (Pennsylvania) school system comes the forty-four-page report of a "Committee Appointed To Study High Schools." The report is called *Programs of Studies* and contains the recommendations of the committee concerning the organization of the curriculum in all secondary schools of the city and reports of conferences with a number of specialists. The recommendations are in the direction of effecting improved adaptation of the curriculum to the youth of the city.

*Contribution of research to individualized teaching* The Bureau of Publications of Teachers College, Columbia University, has issued *Laboratory Techniques of Teaching*, subtitled "The Contribution of Research to Teachers Planning the Individualization of Instruction." An introduction by Professor Thomas H. Briggs explains that the publication is the outgrowth of the work of class members in an advanced course for workers in secondary education, a course which aims at training in the evaluation and use of research. The class for 1937-38 chose for its special problem "Laboratory Techniques in High-School Teaching." The chapter titles are "The Role and History of the Laboratory Method," "Laboratory Techniques in Theory and Practice," "Acquisition of Facts as an Outcome of Laboratory Techniques," "Attitudes, Interests, and Habits as Outcomes of Laboratory Techniques," "Administrative Problems Involved in the Use of Laboratory Techniques of Instruction," and "The Contribution of Research to the Use of Laboratory Techniques." At the end of the publication is "A Selected Bibliography" of twelve pages. A charge of ninety cents is made for *Laboratory Techniques of Teaching*.

#### THE UNIVERSITY OF CHICAGO DINNER

THE University of Chicago Dinner, given annually during the meeting of the American Association of School Administrators, will be held at the Hotel Cleveland, Cleveland, Ohio, on Wednesday

evening, March 1, 1939. Alumni, former students, and friends of the University are most cordially invited to attend. It will assist the committee in charge of the arrangements if those who plan to attend will obtain their tickets in advance. Tickets are two dollars each and may be secured from Professor Robert C. Woellner, University of Chicago.

#### WHO'S WHO FOR FEBRUARY

*The authors of articles in the current issue* L. G. OSBORN, principal of the Rock Junior High School, East St. Louis, Illinois. RUTH BYRNS, associate professor of education and director of teacher training at Fordham University. HAROLD H. PUNKE, professor of education at Georgia State Womans College, Valdosta, Georgia. CECIL WINFIELD SCOTT, associate professor of school administration at the University of Nebraska. HAROLD O. RIED, instructor in education at the University of Akron, Akron, Ohio. JULIA EMERY, teacher of the social studies at Wichita High School East, Wichita, Kansas. DORA V. SMITH, professor of education at the University of Minnesota. R. M. TRYON, professor of the teaching of the social sciences at the University of Chicago. EDITH P. PARKER, assistant professor of the teaching of geography at the University of Chicago. WILBUR L. BEAUCHAMP, assistant professor of the teaching of science at the University of Chicago. ERNST R. BRESLICH, associate professor of education at the University of Chicago. FRANCIS F. POWERS, associate professor of education at the University of Washington.

*The writers of reviews in the current issue* M. G. NEALE, professor of educational administration at the University of Minnesota. A. V. OVERN, professor of education at the University of North Dakota. R. R. RYDER, associate professor of education at Purdue University. ARTHUR E. TRAXLER, assistant director of the Educational Records Bureau, New York City. LOUIS TRAVERS, teacher of English at the Washington Junior High School, Duluth, Minnesota. BARBARA H. WRIGHT, supervisor of counselors in the public schools of Minneapolis, Minnesota.

## RELATIVE DIFFICULTY OF HIGH-SCHOOL SUBJECTS

L. G. OSBORN

Rock Junior High School, East St. Louis, Illinois

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### THE CONCEPT OF DIFFICULTY

IT IS rather commonly believed that some high-school subjects are more difficult than others. Statistics of failure reveal that the percentage of failure is much larger in some high-school subjects than in others and that a high percentage of failure is a general characteristic of some subjects. These subjects are, consequently, considered difficult. Other subjects, in which the percentage of failure is low, are considered easy. That pupils themselves recognize the existence of "snap" subjects and difficult subjects is well known.

The purpose of the study here reported was to identify the subjects which deviate farthest from the norm in difficulty and to measure the amount of deviation characteristic of each. Stated numerically, these difficulty measures would, it was thought, constitute a difficulty scale for high-school subjects somewhat analogous to the scale of hardness of minerals.

The concept of "difficulty" used here denotes the sum total of a pupil's reactions or feelings about a subject with respect to the effort required, the time needed, the emotional blocking to be overcome, or anything else that tends to prevent the attainment of what seems to him to be a satisfactory result. While admittedly subjective and personal, these matters are something about which he can make judgments of the "more" or "less" type. The term "difficulty" is intended to include more than the mere intellectual requirements of a subject. It denotes a complex to which many other elements may also contribute. The pupil's interests, his likes and dislikes, his abilities and his aptitudes, the personality of his teacher, and the odors of a laboratory may all be part of this complex. The fact that, in the opinions of pupils, certain subjects are more difficult than others simply means that for some reason certain factors,

intellectual or otherwise, are more numerous or more intense in some subjects than in others.

#### THE SCALE USED

For attack on this problem a scale was constructed according to the technique used by Thurstone<sup>1</sup> and modified by Remmers<sup>2</sup> for preparing generalized attitude scales. The scale was prepared in two forms, each consisting of 31 descriptive statements which received their scale placements from the combined rankings of 131 judges. The statements described degrees of subject difficulty. The first one was, "A dumbbell could pass this subject." The last statement was, "If my life depended on it, I could not get this subject." The remaining statements were arranged between these two extremes in the order of the degree of difficulty that they were judged to express.

The pupils were asked to mark one or more of the statements that seemed to them to fit best the subjects for which difficulty ratings were desired. These statements represented equal appearing intervals on the scale. The scale value of the median statement marked by a pupil as describing a subject was taken as that pupil's difficulty rating of the subject. The median scale value of the distribution of the ratings of all the pupils, when determined for each subject rated, provided a numerical difficulty rating for each of the thirty-one subjects treated in this study.

After the scale had been completed, it was tested for reliability by securing the coefficients of correlation between the difficulty ratings obtained for each of several subjects on both Form A and Form B of the scale. These correlations ranged from  $.78 \pm .019$  to  $.87 \pm .013$ . The scale was tested for validity by correlating the rank orders of the difficulty ratings of thirty-one subjects obtained by the use of the scale with the rank orders of the difficulty of the same subjects obtained from the ratings of fifty-five high-school principals. A correlation of .85 was obtained, which in terms of the Pearson product-moment correlation would be equivalent to .88.

<sup>1</sup> L. L. Thurstone and E. J. Chave, *The Measurement of Attitude*. Chicago: University of Chicago Press, 1929.

<sup>2</sup> H. H. Remmers (Editor), *Studies in Attitudes*. Studies in Higher Education, XXVI. Bulletin of Purdue University, Vol. XXXV, No. 4. La Fayette, Indiana: Purdue University, 1934.

## APPLICATION OF THE SCALE

After the scale had been constructed, it was administered to pupils in nine secondary schools. A total of 8,785 pupils from 31 subject classes, taught by 363 teachers, co-operated in this study.

TABLE 1

MEDIAN DIFFICULTY RATINGS OF HIGH-SCHOOL SUBJECTS SECURED FROM  
RESPONSES OF BOYS AND MEDIAN INTELLIGENCE QUOTIENT  
OF BOYS MARKING EACH SUBJECT

Subject	Rank Order of Difficulty Ratings	Median of Difficulty Ratings	Median Intelli- gence Quotient of Boys Responding
Latin, second year.....	1	21.5	118
Algebra, advanced.....	2	20.6	110
Latin, first year.....	3	20.4	110
Chemistry.....	4	19.6	110
Shorthand, first year.....	5	19.5	112
French, second year.....	6	18.8	105
Spanish, second year.....	7	17.9	107
French, first year.....	8	17.8	113
Geometry, plane.....	9	17.2	106
Spanish, first year.....	10.5	16.8	111
Geometry, solid.....	10.5	16.8	114
English, fourth year.....	12	16.1	105
Physics.....	13	16.0	110
Economics.....	14	15.8	100
Bookkeeping, first year.....	15	15.7	106
Shorthand, second year.....	16	15.5	104
English, second year.....	17	15.3	105
Civics.....	18	15.2	106
Algebra, first year.....	19	14.7	106
American history.....	20	14.6	108
English, third year.....	21	14.3	108
Modern history.....	22	14.0	104
English, first year.....	23	13.8	103
Biology.....	24	13.3	104
Sociology.....	25	12.6	104
Mechanical drawing.....	26	12.2	102
Typewriting, first year.....	27	11.7	105
Typewriting, second year.....	28	11.5	102
Woodworking.....	29	9.6	103

The median difficulty ratings of the thirty-one subjects, found from the ratings of boys and of girls figured separately, are given in Tables 1 and 2. These two tables show the rank order of the difficulty ratings of the subjects, the scale ratings of the subjects, and the intelligence quotients of the pupils doing the rating.

It should be mentioned that the intelligence quotients given in the tables were secured from six group tests of mental ability which

were used in the schools participating in this study, supplemented in some cases by individual tests. Since the intelligence quotients derived from these tests were not equated in any way, inferences that might be drawn from them must be considered as suggestive or tentative only.

TABLE 2  
MEDIAN DIFFICULTY RATINGS OF HIGH-SCHOOL SUBJECTS SECURED FROM  
RESPONSES OF GIRLS AND MEDIAN INTELLIGENCE QUOTIENT  
OF GIRLS MARKING EACH SUBJECT

Subject	Rank Order of Difficulty Ratings	Median of Difficulty Ratings	Median Intelli- gence Quotient of Girls Responding
Chemistry.....	1	22.5	111
Physics.....	2	21.8	111
Geometry, plane.....	3	21.7	112
Algebra, advanced.....	4	19.3	112
Latin, first year.....	5	18.8	112
Bookkeeping, first year.....	6	18.3	108
Latin, second year.....	7	17.4	110
Algebra, first year.....	8	17.1	109
French, second year.....	9.5	16.7	116
Spanish, second year.....	9.5	16.7	111
Civics.....	11	16.2	106
French, first year.....	12	16.1	112
Geometry, solid.....	13	16.0	130
Shorthand, first year.....	14	15.9	111
Shorthand, second year.....	16	15.8	110
Economics.....	16	15.8	111
Spanish, first year.....	16	15.8	110
American history.....	18	15.5	108
Biology.....	19	14.5	109
Modern history.....	20	14.2	103
English, fourth year.....	21	13.7	115
English, third year.....	22	13.1	108
Foods.....	23	12.6	103
English, second year.....	24.5	12.5	106
Sociology.....	24.5	12.5	110
English, first year.....	26	12.3	109
Typewriting, first year.....	27	11.4	104
Typewriting, second year.....	28	10.8	106
Clothing.....	29	10.0	102

It can be seen from an inspection of these two tables that there were wide differences in the ratings given subjects by the boys and the girls. Second-year Latin stands first in difficulty as rated by the boys, seventh in the ratings of the girls, and fifth in the combined ratings. Chemistry stands first in difficulty with the girls, fourth with the boys, and second in the combined ratings.



Table 3 shows the differences between the ratings of the boys and the girls and the reliability of each difference. This table should be read as follows: The median of the girls' difficulty ratings for physics

TABLE 3  
DIFFERENCES BETWEEN MEDIAN OF BOYS' AND GIRLS' DIFFICULTY RATINGS  
OF HIGH-SCHOOL SUBJECTS AND RELIABILITIES OF DIFFERENCES

Subject	Difference between Median Difficulty Ratings	Probable Error of Difference	Diff. F.E. diff.	Number of Chances in 100 that True Differ- ence Is Greater than Zero
Rated more difficult by girls:				
Physics.....	5.8	0.49	11.8	100
Geometry, plane.....	4.5	.47	9.6	100
Chemistry.....	2.9	.36	8.1	100
Bookkeeping, first year.....	2.6	.59	4.4	100
Algebra, first year.....	2.4	.58	4.1	100
Biology.....	1.2	.47	2.6	96
Civics.....	1.0	.57	1.8	89
American history.....	.9	.72	1.3	81
Modern history.....	.2	.51	.4	61
Shorthand, second year.....	.3	5.80	.1	51
Rated same by girls and boys:				
Economics.....	.0			
Rated more difficult by boys:				
Sociology.....	.1	.31	.3	58
Geometry, solid.....	.8	2.90	.3	58
Typewriting, first year.....	.3	.53	.6	66
Typewriting, second year.....	.7	1.00	.7	68
Spanish, first year.....	1.0	1.23	.8	71
Spanish, second year.....	1.2	.78	1.5	84
Algebra, advanced.....	1.3	.79	1.6	86
French, first year.....	1.7	.84	2.0	92
French, second year.....	2.1	.81	2.6	95
English, third year.....	1.2	.42	2.9	97
Latin, first year.....	1.6	.50	3.2	98
Shorthand, first year.....	3.6	.87	4.1	100
English, fourth year.....	2.4	.49	4.9	100
English, first year.....	1.5	.26	5.8	100
Latin, second year.....	4.1	.52	7.9	100
English, second year.....	2.8	0.34	8.2	100

minus the median of the boys' difficulty ratings for physics gives an obtained difference of 5.8, which shows a probability that physics is easier for boys than for girls. The probable error of the difference of these medians is 0.49. The obtained difference divided by the

probable error of the difference (sometimes called the "critical ratio") is 11.8. Since a critical ratio of 4.0 indicates practical certainty that there will be a true difference greater than zero between the medians, a critical ratio of 11.8 indicates even more strongly that there is a true difference in the difficulty ratings which boys will give physics compared with the ratings which girls will give physics and that the ratings of girls will always be the higher.

Five subjects stood out as unquestionably harder for girls than for boys, namely, physics, plane geometry, chemistry, first-year book-keeping, and first-year algebra. Five subjects were harder for boys than for girls: second-year English, second-year Latin, first-year English, fourth-year English, and first-year shorthand. The only subject in which there was no difference was economics.

It is interesting to note not only that certain subjects were more difficult for one sex than for the other but also that certain *groups* of subjects were more difficult for boys and others more difficult for girls. The girls rated all subjects involving mathematics, with the exception of solid geometry and advanced algebra, as more difficult than did the boys. All sciences were rated more difficult by the girls than by the boys, as were also the social sciences, except sociology. The boys, on the other hand, invariably marked subjects involving languages, both English and foreign, as more difficult than did the girls. This demarcation between the sexes was strong.

Since subjects are usually thought of as uniformly difficult without considering the sex of those enrolled in them, the findings of this part of the study are of particular significance. They indicate that for guidance purposes, if for no other, the difficulty of a subject must not be considered as a single composite. To advise boys or girls on the basis of a composite rating would, in either case, be a misrepresentation of the facts.

## RELATION OF VOCATIONAL CHOICE TO MENTAL ABILITY AND OCCUPATIONAL OPPORTUNITY

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### OBJECT OF THE INQUIRY

KNOWLEDGE about the relation that the choice of a vocation has to mental ability and to occupational opportunity is necessary for the formulation of intelligent principles of vocational and educational guidance, and yet there is little available information on the subject. This study was undertaken for the purpose of contributing data in this field.

The principal object of the investigation was to determine what is the relation between mental ability and the occupational choices of high-school Seniors. Another purpose of the study was to discover the relation between the proportions of high-school Seniors who choose to enter the various occupations and the proportion of the gainfully employed who are actually engaged within those occupational fields.

The findings are of such striking nature that they are presented here with only the briefest of interpretations.

### SOURCES OF THE EVIDENCE

Material for the study was collected over a four-year period and is based on data for nearly eighty thousand high-school Seniors. The material was collected through the Wisconsin State Testing Program, which is directed by Professor V. A. C. Henmon. During the four years in which data were being gathered, 42,479 girls and 34,472 boys in all the secondary schools in the state took intelligence tests and furnished information about the occupations that they intended to enter. The percentile scores on the test were taken as the measure of mental ability, or, to speak more properly, of scholastic aptitude. The tests given the high-school Seniors were the Ohio State University Psychological Test in 1929, the Psychological

Examination of the American Council on Education in 1930 and 1931, and the Henmon-Nelson Tests of Mental Ability since 1932. As all the pupils were from high schools in Wisconsin, the 1930 occupational census figures for the state of Wisconsin were used in the comparison of occupational choices of the pupils with the actual distribution of workers in the occupations.

#### CHOICES OF BOYS

Of the 34,472 Senior boys, 26,118 stated that they had chosen occupations which they planned to enter after they completed their schooling, and 8,354 said that they had no occupational preferences. Among the occupations listed by the boys, each of 57 different fields of work was named by at least 25 boys, and a number of miscellaneous occupations were listed infrequently by a total of 147 boys. Table 1 shows the distribution of occupational choices, measures of the central tendency in mental ability within each occupational-choice group, and the percentage of the gainfully employed population of Wisconsin actually found in each occupation. The occupations are arranged in this table according to the median mental ability of the boys choosing each occupation.

The great differences between the average abilities of the boys in the various occupational-choice groups is perhaps the most striking fact which is shown in Table 1. It must be remembered that the test scores are in terms of percentiles and that therefore the difference between the median of 87.9 for the pupils who chose to be authors and the median of 30.0 for those who said they intended to be dairy-men or cheese-makers (a difference of 57.9) represents more than half the range of possible scores. Likewise it must be remembered that a group with a "normal" distribution would necessarily have a median of 50, an upper quartile of 75, and a lower quartile of 25. It is evident, therefore, that more than three-fourths of the boys in the highest ranking professions are above the average in ability while only about a fourth to a third of the boys in the low ranking groups measure up to the average in ability. It should also be noted that the high ranking groups are farther above the median than the lowest groups are below it and that there is less variability within the high ranking groups (note column showing quartile deviation).

TABLE 1

OCCUPATIONAL CHOICES OF 34,472 HIGH-SCHOOL SENIOR BOYS, PERCENTAGE OF GAINFULLY EMPLOYED MEN IN WISCONSIN ENGAGED IN SAME OCCUPATIONS IN 1930, AND PERCENTILE RANKS OF BOYS IN TESTS OF SCHOLASTIC ABILITY

OCCUPATION	BOYS CHOOSING OCCUPATION		PERCENT- AGE OF GAINFULLY EMPLOYED MEN IN OCCUPA- TION IN 1930	PERCENTILE RANK OF BOYS IN SCHOLASTIC ABILITY			
	Num- ber	Per Cent		Lower Quar- tile	Med- ian	Upper Quar- tile	Quar- tile Devia- tion
1. Writing (author).....	25	0.07	0.005	77.5	87.9	94.3	8.4
2. Chemical engineering....	204	.59	.02	62.1	82.2	92.6	15.3
3. Chemistry.....	686	1.99	.10	52.2	78.3	91.7	19.7
4. Journalism.....	603	1.75	.08	53.1	77.6	92.0	19.4
5. Law.....	1,143	3.32	.28	48.0	74.0	90.7	21.4
6. Civil engineering.....	610	1.77	.17	47.7	73.3	89.3	21.1
7. Advertising.....	129	.37	.14	52.3	71.9	89.5	18.6
8. Medicine.....	1,074	3.12	.32	44.8	71.2	89.2	22.2
9. Ministry.....	157	.46	.36	44.0	68.7	88.4	22.2
10. Science.....	207	.60	.....	45.1	67.5	90.5	22.7
11. Army or navy.....	112	.32	.02	36.3	65.5	85.9	24.8
12. Mechanical engineering..	416	1.21	.15	39.7	65.0	83.9	22.1
13. Mining engineering.....	42	.12	.02	37.5	65.0	81.3	21.9
14. Architecture.....	421	1.22	.05	41.9	64.0	85.0	21.6
15. Engineering (general)...	1,926	5.59	.92	39.0	63.0	84.7	22.8
16. Commercial art.....	272	.79	.....	33.7	62.8	78.3	22.3
17. Entertainment (dramat- ics).....	90	.26	.15	36.9	62.5	84.1	23.6
18. Electrical engineering...	1,146	3.32	.11	38.1	62.0	82.2	22.1
19. Accountancy.....	594	1.72	.35	37.2	61.8	82.7	22.7
20. Miscellaneous.....	147	.43	.....	28.0	60.8	84.2	28.1
21. Radio.....	336	.97	.007	30.3	59.6	78.5	24.1
22. Clerical work.....	388	1.13	2.72	33.3	56.9	81.4	24.0
23. Banking.....	179	.52	.26	32.3	56.1	82.3	25.0
24. Teaching.....	1,987	5.76	.53	30.7	55.6	79.9	24.6
25. Landscape gardening....	56	.16	.....	22.5	55.0	78.8	28.2
26. Forestry.....	366	1.06	.61	31.4	54.8	74.9	21.8
27. Business.....	2,024	5.87	9.22	30.1	53.6	78.1	24.0
28. Pharmacy.....	381	1.11	.24	29.1	53.6	74.2	22.6
29. Aviation.....	1,683	4.88	.01	30.1	52.2	75.7	22.8
30. Secretary and stenogra- pher.....	103	.30	.06	29.8	52.2	76.6	23.4
31. Art.....	191	.55	.07	23.0	52.1	73.3	25.2
32. Drafting and designing..	732	2.12	.30	27.1	51.6	73.5	23.2
33. Dentistry.....	277	.80	.23	27.9	49.4	70.5	21.3
34. Music.....	650	1.89	.16	24.9	49.3	74.6	24.8
35. Civil service.....	137	.40	1.48	25.3	47.4	68.1	21.4
36. Veterinary science.....	29	.08	.05	28.3	47.1	53.8	12.8
37. Photography.....	31	.09	.07	25.5	47.0	72.5	23.5
38. Printing.....	228	.66	.62	22.4	46.4	72.6	25.1
39. Salesmanship.....	306	.89	3.86	25.5	46.2	72.7	23.6

TABLE 1—Continued

OCCUPATION	BOYS CHOOSING OCCUPATION		PERCENT- AGE OF GAINFULLY EMPLOYED MEN IN OCCUPA- TION IN 1930	PERCENTILE RANK OF BOYS IN SCHOLASTIC ABILITY			
	Num- ber	Per Cent		Lower Quar- tile	Med- ian	Upper Quar- tile	Quar- tile Devia- tion
40. No preference.....	8,354	24.23	.....	29.2	45.6	72.8	21.8
41. Osteopathy, chiropractic, chiropody, and optome- try.....	31	.09	.06	17.5	45.0	72.5	27.5
42. Skilled labor.....	237	.69	8.70	22.3	45.0	62.0	19.9
43. Bookkeeping.....	396	1.15	.60	24.4	44.6	64.0	19.8
44. Unskilled labor.....	157	.46	14.75	11.6	43.7	64.2	26.3
45. Telephone and telegraph.....	42	.12	.55	15.8	42.5	66.4	25.3
46. Merchant.....	155	.45	3.72	19.9	42.3	67.2	23.7
47. Electrical work.....	708	2.05	1.16	19.1	41.2	65.8	23.4
48. Professional sports.....	68	.20	.....	20.0	41.0	63.8	21.9
49. Undertaking.....	94	.27	.08	21.5	40.9	59.6	29.1
50. Agriculture.....	1,820	5.28	30.72	17.8	40.6	63.8	23.0
51. Mechanics.....	700	2.20	1.61	18.2	40.0	64.5	23.2
52. Physical education.....	856	2.48	.03	16.7	38.9	63.2	23.3
53. Postal service.....	75	.22	.47	17.5	36.8	62.3	22.4
54. Construction.....	292	.85	5.55	16.9	36.8	61.6	22.5
55. Retail clerking.....	42	.12	.44	9.5	36.0	56.4	23.5
56. Machinist.....	85	.25	2.48	14.8	34.2	59.7	22.4
57. Forest-ranger service.....	29	.08	.03	14.5	31.7	62.5	24.0
58. Barbering.....	87	.25	.59	14.4	31.0	54.5	20.1
59. Dairying or cheese-mak- ing.....	66	.19	.63	9.2	30.0	55.6	23.2
Total.....	34,472	99.98	95.912	28.0	53.3	78.4	25.2

These findings indicate that different occupations tend to attract boys of differing scholastic ability and therefore that occupational ambitions themselves exert a selection which cannot be overlooked if vocational guidance is to have validity. For example, of four boys who plan to become chemists, three will probably be much above average ability, and, regardless of the requirements which the profession itself demands, the extremely high average ability of "potential" chemists is a factor which must be considered in guidance work.

To find whether the differences between the median abilities of the occupational-choice groups are reliable, the reliability of the difference between each pair of medians was computed. The table presenting the critical ratios between the medians is too long and not of enough significance to include here since the facts from it can

be generalized in a few words. The obtained differences between the medians of practically all high ranking groups are reliable. The differences between the medians of all the higher ranking groups and the middle and the low ranking groups are reliable. The differences between the medians of the low ranking groups are not large enough to be statistically reliable. In other words, while the difference between the median of the group who indicated that they wished to become authors and the median of every lower group (except those who chose to be chemical engineers) is large enough to be completely reliable, the difference between the median of the unskilled-labor group and the median of any other groups listed below it in Table 1 is not large enough to give statistical reliability. These facts indicate that the differences between the medians at the top of the list have a statistical reliability which guarantees that true differences in average mental ability exist between the pupils who chose the various high ranking occupations but that there is no indication of true differences in average mental ability between the groups of pupils who chose the low ranking occupations.

Recognition that large differences in average ability exist between pupils who chose different occupations should not obscure the fact that within each occupational-choice group great differences in ability are also to be found. For the purpose of illustrating this point, the distributions of test percentiles, grouped in tenths, of the boys who chose eight particular occupations are given in Table 2. This table shows that the boys who wished to become authors made up the only group among the entire occupational-preference groups listed here (and as a matter of fact the only group among all 57 occupational-choice groups) which does not include the full range of ability as measured by the tests. This fact, I believe, deserves the most careful consideration from guidance workers. What about the 126 boys in the lowest tenth who wanted to be teachers? What about the 97 boys in the lowest tenths who planned to become doctors? What is the significance of the distribution of ability among the 1,683 boys who planned to become aviators?

#### CHOICES OF GIRLS

Before the other problems which Tables 1 and 2 suggest are mentioned, the occupational choices of the 42,479 girls, shown in Table 3,



should be examined. Each of 39 fields of work was chosen by at least 22 girls, while 133 of the girls chose scattered occupations which are grouped under "Miscellaneous." While 24 per cent of the boys said that they had not made occupational choices, only 14 per cent of the girls reported that they had not yet chosen occupations. It is interesting to note that the highest average ability among both the boys and the girls is found among those who said that they intended to be authors and that the median (33.5) of the group ranking lowest

TABLE 2  
DISTRIBUTION, ACCORDING TO PERCENTILE RANK ON TESTS OF  
SCHOLASTIC ABILITY, OF HIGH-SCHOOL SENIOR BOYS  
CHOOSING EIGHT OCCUPATIONS

Percentile Rank	Author	Law	Medicine	Engineering	Teaching	Aviation	Agriculture	Dairying
90-100.....	11	307	253	339	245	163	89	2
80-89.....	7	193	190	269	228	176	123	4
70-79.....	3	120	107	202	196	188	127	3
60-69.....		136	119	219	240	178	187	4
50-59.....	1	83	94	180	190	176	181	8
40-49.....	1	92	82	220	216	192	215	4
30-39.....	1	82	69	157	189	191	192	8
20-29.....	1	56	63	118	170	132	193	6
10-19.....		50	66	145	187	179	269	9
0-9.....		24	31	77	126	108	244	18
Total.....	25	1,143	1,074	1,926	1,987	1,683	1,820	66
Median rank	87.9	74.0	71.2	63.0	55.6	52.2	40.6	30.0

among the girls—those who intended to be "beauticians"—is matched by the low median (30.0) of the boys who intended to become barbers. Many other exceedingly interesting similarities and differences will be seen if the tables are examined closely, for example, the marked superiority of the girls who chose to be pharmacists over the boys who chose that profession, the superiority of the girls over the boys among those who stated that they wished to enter civil service, and the superiority of the boys who chose to be ministers over the girls who said that they intended to be missionaries.

The general statements made concerning the statistical reliability of the differences between medians for the boys also hold true of the differences for the girls. The distribution of ability within the

TABLE 3

OCCUPATIONAL CHOICES OF 42,479 HIGH-SCHOOL SENIOR GIRLS, PERCENTAGE OF GAINFULLY EMPLOYED WOMEN IN WISCONSIN ENGAGED IN SAME OCCUPATIONS IN 1930, AND PERCENTILE RANKS OF GIRLS IN TESTS OF SCHOLASTIC ABILITY

OCCUPATION	GIRLS CHOOSING OCCUPATION		PERCENT- AGE OF GAINFULLY EMPLOYED WOMEN IN OCCU- PATION IN 1930	PERCENTILE RANK OF GIRLS IN SCHOLASTIC ABILITY			
	Num- ber	Per Cent		Lower Quar- tile	Me- dian	Upper Quar- tile	Quar- tile Devi- ation
1. Writing (author).....	36	0.08	0.01	65.0	84.4	93.1	14.1
2. Journalism.....	612	1.44	.11	63.8	84.3	93.5	14.9
3. Science.....	117	.28	.....	59.1	79.6	92.1	16.5
4. Medicine.....	127	.30	.04	52.8	79.4	91.4	19.3
5. Personal and club service	28	.07	.02	45.0	78.6	91.3	23.2
6. Advertising.....	54	.13	.07	55.0	76.7	90.4	17.7
7. Law.....	97	.23	.02	52.5	74.2	96.7	22.1
8. Library work.....	496	1.17	.35	43.8	68.7	86.7	21.5
9. Dramatics.....	326	.77	.07	43.8	68.3	84.5	20.4
10. Social service.....	166	.39	.20	41.5	67.7	86.3	22.4
11. Commercial art.....	244	.57	.....	47.5	67.3	86.8	19.7
12. Pharmacy.....	54	.13	.04	43.8	67.0	83.0	19.6
13. Landscape gardening....	22	.05	.....	38.3	66.7	85.0	23.4
14. Accountancy.....	103	.24	.20	39.5	65.0	81.4	30.0
15. Secretary.....	1,068	2.51	.....	37.9	60.3	81.5	21.8
16. Civil service.....	30	.07	.....	22.5	60.0	85.0	31.3
17. Interior decorating.....	222	.52	.05	35.0	59.6	82.2	23.6
18. Dietetics.....	229	.54	.....	37.1	59.4	81.1	22.0
19. Music.....	1,128	2.66	.72	32.4	59.2	78.8	23.2
20. Missionary work.....	58	.14	.30	35.5	58.6	80.6	22.6
21. Laboratory technician...	83	.20	.10	32.5	57.5	82.7	25.1
22. Miscellaneous.....	133	.31	.....	28.0	57.2	85.2	28.6
23. Teaching.....	10,973	25.83	10.15	20.9	54.0	77.9	24.0
24. Art.....	433	1.02	.14	38.0	53.7	81.7	21.9
25. Physical education.....	701	1.65	.03	32.2	52.7	73.9	20.9
26. Dressmaking and design- ing.....	122	.29	1.46	24.1	52.5	73.1	24.5
27. Business.....	1,539	3.62	2.35	27.4	49.5	72.0	22.3
28. Dental hygiene.....	69	.16	.17	28.5	48.3	76.3	23.9
29. Drafting and designing..	27	.06	.04	15.4	48.3	74.2	29.4
30. Home economics.....	542	1.28	.....	24.4	47.8	61.2	18.4
31. Dancing.....	37	.09	.....	23.1	47.0	79.2	28.1
32. Stenographer.....	8,586	20.21	7.94	25.4	46.4	68.2	21.4
33. No preference.....	5,945	14.00	.....	19.6	43.5	69.8	25.1
34. Nursing.....	5,386	12.68	2.90	19.6	42.1	65.8	23.1
35. Clerical work.....	844	1.99	5.96	19.9	39.8	64.0	22.1
36. Bookkeeping.....	527	1.24	4.95	19.5	39.6	67.7	24.1
37. Aviation.....	23	.05	.0009	23.8	39.0	72.5	24.4
38. Telephone and telegraph operating.....	69	.16	2.80	16.1	37.0	59.7	21.8
39. Domestic service.....	82	.19	3.71	16.5	34.4	58.6	21.1
40. Retail clerking.....	193	.45	2.46	15.4	34.0	59.9	22.3
41. Beauty culture.....	948	2.23	.95	15.1	33.5	56.6	20.8
Total.....	42,479	100.00	48.3109	25.7	49.2	73.7	24.0

groups is also similar: all the occupational-choice groups of the girls contain the full range of ability as measured by the tests—a finding which means that for both boys and girls the differences within the groups far exceed the differences between the groups.

#### RELATION TO OPPORTUNITIES

Both Table 1 and Table 3 indicate another fact that is of fundamental importance in guidance, namely, the lack of balance between the number of boys and girls who chose particular occupations and the percentages of the employed workers engaged in these occupations according to the 1930 census figures. For example, 23 per cent of the boys chose to enter law, medicine, some field of engineering, or aviation, while only 2 per cent of the male employed population of the state was found in these occupations. On the other hand, more than 50 per cent of the workingmen in the state were engaged in agriculture, construction work, or unskilled labor, but less than 7 per cent of the boys wished to enter these fields. Among the girls nearly 60 per cent had decided to be teachers, stenographers, or nurses, while only about 20 per cent of employed women were actually found in these fields. The percentages of girls who chose clerical work, bookkeeping, and domestic service were far less than the proportions of women engaged in these occupations. Although these figures obviously should not be accepted at their face value, because not all the employed persons are high-school graduates, there is still an overwhelming lack of relation between occupational choices and occupational distribution.

This study shows clearly, then, that some occupations attract a disproportionately large number of boys and girls and that some professions, such as law and medicine, attract boys and girls of exceedingly high mental ability in numbers sufficient to fill the fields. For example, among the boys who chose to be lawyers, the number in the top tenth alone would undoubtedly be greater than the profession could absorb.

#### FURTHER QUESTIONS

Although the facts presented in this study were sought in an effort to answer questions about the relations between ability and vocational choice and between opportunity and vocational choice, it

would seem that the findings actually raise more questions than they answer. It may be concluded that occupational preferences have some relation to scholastic ability and that there are great differences in average ability of the pupils in the groups attracting the brightest and those in the groups attracting the dullest. The wide range of ability within the groups must also be recognized. These conclusions raise countless questions with regard to desirable guidance procedure. Likewise it may be concluded that there is a lack of proportion between the numbers of boys and girls planning to enter particular fields of employment and the numbers that these fields can be expected to absorb. To recognize this disproportion means to admit numerous other questions about guidance procedures—procedures which, I suggest, cannot be intelligently determined at present because of the confusion of the purposes and the aim of American education.

## MEMBERSHIP AND INTERESTS OF ADULT-EDUCATION CLASSES

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THIS article deals with the social composition and the study interests of the membership in adult classes organized in Chicago under the Federal Emergency Education Program. The data were collected in 1935, mainly by Edward G. Punke, on questionnaires which were distributed to class members and returned to the teachers at subsequent meetings. Irregularity in attendance and lack of systematic procedure in certain aspects of the program resulted in a rather low percentage of returns and in the receipt of many unusable returns. A total of 1,688 persons contributed usable data which have sociological and educational value.

*Social composition of class membership.*—Table 1 presents data on the age, the sex, the marital status, and the nativity of white persons participating in the courses offered.

Single persons born in the United States constituted 64.0 per cent of the participants, and nearly two-thirds of this group were women. Among the married participants born in the United States there were a fifth as many men as women. The proportion of males among participants varied from 21.0 per cent in the age group of thirty-one to forty to 42.6 per cent for the age group of twenty-two to twenty-five years. In the age group of eighteen to twenty-one, which includes nearly a third of all participants, well over a third were men. In the entire group 31.9 per cent of the participants were men and 68.1 per cent were women. A larger proportion of the foreign-born participants than of the native-born were married; age differences, perhaps reflecting immigration restrictions and related factors, seem important here.

Variation appears in the percentages of participants in the different age groups, but it is noteworthy that 59.0 per cent were

twenty-five years old or under and that 45.1 per cent were not over twenty-one. Of all participants, 53.5 per cent were single persons

TABLE 1

DISTRIBUTION, ACCORDING TO SEX, AGE, MARITAL STATUS, AND BIRTHPLACE OF 1,459 WHITE PERSONS PARTICIPATING IN ADULT-EDUCATION CLASSES

AGE	BORN IN UNITED STATES		BORN IN NORTHWEST EUROPE*		BORN ELSEWHERE		TOTAL	PER- CENT- AGE OF SEX IN AGE GROUP
	Single	Married	Single	Married	Single	Married		
Men:								
Under 18.....	50				1		51	26.7
18-21.....	162	4	4	1	6		177	37.9
22-25.....	74	5	2		4	2	87	42.6
26-30.....	24	10		1	5	2	42	24.1
31-40.....	14	18	4	1	7	10	54	21.0
Over 40.....	12	10	3	5		24	54	32.5
All men.....	336	47	13	8	23	38	465	
Percentage of total...	23.0	3.2	0.9	0.6	1.6	2.6		31.9
Women:								
Under 18.....	133	1	5	1			140	73.3
18-21.....	277	4	3	1	5		290	62.1
22-25.....	84	22	2	1	5	3	117	57.4
26-30.....	51	52	4	6	6	13	132	75.9
31-40.....	38	103		20	2	40	203	79.0
Over 40.....	15	50	1	13	3	30	112	67.5
All women.....	598	232	15	42	21	86	994	
Percentage of total...	41.0	15.9	1.0	2.9	1.4	5.9		68.1
Men and women:								
Under 18.....	183	1	5	1	1		191	13.1
18-21.....	439	8	7	2	11		467	32.0
22-25.....	158	27	4	1	9	5	204	13.9
26-30.....	75	62	4	7	11	15	174	11.9
31-40.....	52	121	4	21	9	50	257	17.6
Over 40.....	27	60	4	18	3	54	166	11.5
Total.....	934	279	28	50	44	124	1,459	100.0
Percentage	64.0	19.1	1.9	3.5	3.0	8.5	100.0	

\* Includes Austria, Belgium, British Isles, France, Germany, Holland, the Scandinavian countries, and Switzerland.

born in the United States and not over twenty-five years old; 65.3 per cent of the married and the single persons, combined, were native-born and not over thirty.

Space required the omission from Table 1 of certain data which are summarized here. The 204 negroes supplying data included 32 men and 172 women. Fifteen men and 89 women were married, and 29 men and 169 women were born in the United States. Nineteen colored women were widowed or divorced. No widowed or divorced men, either negro or white, supplied usable data. There were, however, 25 widowed or divorced white women, 22 of whom were born in the United States.

Certain observations may be made from the foregoing data. Obviously the classes did not greatly attract persons in middle and later life. This fact is important in educating adults with regard to emerging economic or political issues, because there has been more change in these aspects of life since the older adults were in school than since the younger adults were there. Moreover, in older days the curriculum made a less concrete attack on problems in these fields than has more recently been the case.

The large proportion of participants who had only recently left high school or who did not attend high school raises the question whether many participants might not have been better provided for by some high-school or junior-college arrangement than by the adult-class program. This issue is similar to that posed by a comparison of the educational merits of the Civilian Conservation Corps camps with programs offered by secondary schools.<sup>1</sup>

Perhaps several factors were involved in the sex distribution of participants. Women may have more leisure than men and may thus take more extensive advantage of adult-class opportunities. It should be noted, however, that during the period covered by the study there was widespread male unemployment. Possibly men have a larger number of other ways of using leisure than have women. Does the twenty-year-old boy, for example, engage in vacant-lot baseball while the twenty-year-old girl engages in adult classes? Moreover, C.C.C. camps were accommodating substantial numbers of young men at the time these data were gathered. However, the

<sup>1</sup> a) L. John Nuttall, Jr., "Possible Influences on the Public Schools of the C.C.C. Educational Program," *School Review*, XLIII (September, 1935), 508-13.

b) Ray H. Bracewell, "The Service of the Public Junior College in the Current Crisis," *School Review*, XLIII (September, 1935), 514-22.



smaller percentages of men in the older age groups compared with the younger, except the group under eighteen years of age, indicate that this point can be pressed too far. The time of day at which classes met may have been a factor, among the employed, so far as sex ratio in enrolment is concerned. So too may the places of meeting, if one notes that during this time large numbers of unemployed single men were corralled in shelters in the socially disintegrated parts of the city, without decent clothing, without access to publicity given the adult-education program, and without feasible means of transportation. Unemployed single women were better taken care of and lived more largely in residential areas, and the foregoing handicaps were, therefore, decidedly reduced. The possibility that the course offerings made a wider appeal to women than to men will be subsequently considered.

*Family responsibility of class members.*—If leisure is important for participation in adult classes, a relation might be expected between home responsibility and participation. This relation was studied through an analysis of the number of children in the homes of the married women participants. The data appear in Table 2.

Among the married women supplying data, the percentages of those who reported no children and of those who reported one child were larger in the case of women born in the United States than in the case of those born elsewhere. Among all age and nativity groups collectively, slightly more than a quarter (26.7 per cent) reported no children, and slightly more than a half (51.1 per cent) reported not more than one child. When the data were tabulated, it was noted that, of those reporting three or more children, twenty-three women reported five or more.

The number of married men supplying information on this item was insufficient to justify separate tabulation.

The proportion of married women with few or no children, as well as the large proportion of single participants noted in Table 1, suggests that persons with heavy family responsibilities were not extensively reached by the classes. The practice of extending employment preference to persons of family responsibilities may have been a factor here, because persons with such responsibilities may have been employed and thus may have had less time or energy than

TABLE 2  
DISTRIBUTION, ACCORDING TO AGE, BIRTHPLACE, AND NUMBER OF CHILDREN  
OF 374 WHITE MARRIED WOMEN PARTICIPATING IN  
ADULT-EDUCATION CLASSES

AGE	NUMBER OF WOMEN HAVING—				PERCENTAGE IN AGE GROUP
	No Children	One Child	Two Children	Three or More Children	
Born in United States:					
25 years or under.....	10	8	4	.....	9.3
26-30.....	21	19	15	4	24.9
31-40.....	31	31	25	17	43.9
Over 40.....	11	16	11	14	21.9
Total.....	73	74	55	35	.....
Per cent.....	30.8	31.2	23.2	14.8	100.0
Born in northwest Eu- rope:*					
25 years or under.....	1	.....	.....	1	5.9
26-30.....	.....	1	1	.....	5.9
31-40.....	3	4	6	3	47.0
Over 40.....	1	.....	5	8	41.2
Total.....	5	5	12	12	.....
Per cent.....	14.7	14.7	35.3	35.3	100.0
Born in east and south Europe:†					
25 years or under.....	.....	.....	.....	2	2.4
26-30.....	3	2	3	1	10.8
31-40.....	8	4	13	16	49.4
Over 40.....	6	3	4	18	37.4
Total.....	17	9	20	37	.....
Per cent.....	20.5	10.8	24.1	44.6	100.0
Born elsewhere:					
25 years or under.....	.....	1	1	1	15.0
26-30.....	1	.....	.....	.....	5.0
31-40.....	4	.....	4	4	60.0
Over 40.....	.....	2	1	1	20.0
Total.....	5	3	6	6	.....
Per cent.....	25.0	15.0	30.0	30.0	100.0

\* Includes Austria, Belgium, British Isles, France, Germany, Holland, the Scandinavian countries, and Switzerland.

† Includes the parts of Europe not listed in preceding note.

others for adult classes. At any rate it seems that classes such as those studied are not especially promising as avenues of parent education, primarily because persons of large parental responsibility are not enrolled. The possibility of supplying content or course organization that would be more appealing to persons of family responsibility is, of course, to be kept in mind.

*Migration of class members.*—Chicago, like other population centers, is an area to which many persons have migrated during recent

TABLE 3  
DISTRIBUTION, ACCORDING TO BIRTHPLACE AND EMPLOYMENT STATUS  
OF 699 NATIVE-BORN WHITE PERSONS PARTICIPATING  
IN ADULT-EDUCATION CLASSES

	BORN IN CHICAGO		BORN IN MIDDLE WEST*		BORN IN OTHER PARTS OF UNITED STATES		TOTAL	
	Num- ber	Per Cent	Num- ber	Per Cent	Num- ber	Per Cent	Num- ber	Per Cent
Men:								
Employed.....	59	23.5	28	11.2	13	5.2	100	39.8
Unemployed.....	110	43.8	32	12.7	9	3.6	151	60.2
Women:								
Employed.....	77	17.2	30	6.7	9	2.0	116	25.9
Unemployed.....	233	52.0	75	16.7	24	5.4	332	74.1
Men and women:								
Employed.....	136	19.5	58	8.3	22	3.1	216	30.9
Unemployed.....	343	49.1	107	15.3	33	4.7	483	69.1

\* States included are Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin.

decades. Migrants, of course, reflect the cultural backgrounds of their parent areas and must learn to adjust to the receiving areas. Hence it is of interest to note the extent to which American-born participants in the adult classes were natives of Chicago, as contrasted with other parts of the country. Pertinent data appear in Table 3.

Of the 699 persons supplying usable data on this point, more than two-thirds (68.6 per cent) were born in Chicago, and 23.6 per cent were born elsewhere in the Middle West. For both sexes, somewhat larger percentages of Chicago-born persons than of migrants were

unemployed at the time of the study. The percentages for men were 65.1 and 50.0, respectively; for women, 75.2 and 71.7, respectively. Data not included here show that a larger proportion of the migrants than of Chicago-born persons were in the older age groups—a fact which is probably significant with reference to employment status.

No effort was made to compare the ratio of Chicago-born to migrant participants in adult classes with the corresponding ratio in the total population of Chicago. It might seem, however, that, owing to the heavy cityward migration of the 1920's, the representation of migrants would have been heavier in the classes studied than in the city at large. The situation described bears on the extent to which such classes are significant in helping migrants adjust to the urban community to which they have come.

*Subject-matter interests of class members.*—The courses for which persons actually enrol, or those for which they would like to enrol if such courses were offered, reflect in a different way the character of service rendered by adult classes. Table 4 presents data for white persons on the courses taken and the courses desired.

As preliminary tabulations for men, according to nativity and marital status, showed no significant differences, Table 4 makes no differentiations. Moreover, the small number of single women of foreign birth seemed inadequate to justify elaboration and was omitted.

The extensive interest of American-born single women in such subjects as bookkeeping, business English, comptometer operation, shorthand, and typewriting reflects a heavy vocational drive. A comparison of this group of subjects with fields which have less vocational significance, such as art, drama, history, literature, psychology, or public speaking, makes the vocational objective particularly apparent. American-born married women, contrasted with single women, showed proportionately less interest in the vocational fields noted but more in sewing, dressmaking and millinery, and etiquette. These differences perhaps reflect greater leisure and greater home interest among married women. A comparison of married women by nativity shows that those of American birth were more interested in art, bookkeeping, drama, dressmaking, French, psychology, public speaking, sewing, shorthand, and typewriting, while

those of foreign birth were more interested in civics, geography, history, and spelling. A difference in the level and the character of

TABLE 4  
NUMBER OF WHITE MEN AND WOMEN INDICATING COURSES TAKEN IN  
ADULT-EDUCATION CLASSES AND COURSES THAT  
THEY DESIRE TO TAKE

COURSE	MEN		AMERICAN-BORN SINGLE WOMEN		AMERICAN-BORN MARRIED WOMEN		FOREIGN-BORN MARRIED WOMEN		TOTAL	
	Taking Course	Desiring Course	Taking Course	Desiring Course	Taking Course	Desiring Course	Taking Course	Desiring Course	Taking Course	Desiring Course
Arithmetic and mathematics...	20	13	2	2	8	1	0	2	30	18
Art.....	15	3	10	1	7	5	1	1	32	10
Ballet and tap dancing.....		14	5	12					5	26
Barber and beauty work.....				9		2	1		1	11
Bookkeeping.....	32	5	27	10	8	2	2		60	23
Business English.....	27	3	23	11	14	2	10		74	16
Business law.....	10	2	2	1	1	1			13	4
Civics, political science, etc.....	13	9	6		4		14	1	37	10
Clerical practice and filing.....	4		6	2	1		2		11	4
Comptometer operating.....	10	3	16	20		1		1	26	25
Cooking.....		2	2	11	3	13		9	5	33
Dramatic art.....	57	5	22	7	21		3	1	103	13
Drawing.....	4	3	9	4	2	1	2		16	10
Dressmaking and millinery.....			7	6	13	8			20	14
Economics.....	8	2	5			2			13	4
Etiquette.....	20	4	3	2	12		18		53	6
French.....	3	1	10	5	10		3		26	6
Geography.....	5	3			1	2	0	9	12	14
Gymnastics.....	1	0		1	1			1	2	8
History.....	4	6	1	2		2		11	5	21
Journalism.....		3	1	1		1			1	5
Literature.....	3			2	3		6		12	2
Music (general).....	14	13	10	9	5	3	4	4	33	29
Nursing.....	1		2	4		1			3	5
Piano.....	15	6	6	7	2	5		1	24	19
Psychology.....	18	2	7	4	7	3	1		33	9
Public speaking.....	19	7	10	4	11	5	3		43	16
Sewing.....		1	48	10	70	10			127	21
Shorthand.....	49	11	143	5	18	2	2		212	18
Sociology.....	11		11	4	2				24	4
Spanish.....	2	7	8	9	4				16	14
Spelling.....		1	1		1		10		12	1
Typewriting.....	77	7	134	18	14	2	4	1	220	28
Voice-training.....	9	2	7	5		3	2	1	18	11
Other.....	119	79	79	75	51	24	67	8	316	186
Total.....	572	219	623	269	303	101	167	55	1,665	644

previous education is probably reflected here, as is perhaps also a difference in current or hoped-for social status in American society.

Men, as compared with American women, showed more interest in arithmetic and mathematics, civics, political science, geography, and history. The interest of men in ballet and tap dancing, dramatic

art, and etiquette was probably vocational, at least in part. Preliminary tabulation according to age indicated that all persons of both sexes manifesting interest in ballet and tap dancing were from eighteen to twenty-five years of age.

Tabulation of the courses desired indicates that in some fields there was more desire than was accommodated, for example, in arithmetic and mathematics, ballet and tap dancing, barber and beauty work, bookkeeping, comptometer operation, cooking, dress-making and millinery, geography, history, music, public speaking, and typewriting. This reflection of desire suggests possible improvements in the distribution of the offering, although it should be noted that these desires were probably scattered widely over the city.

In the large "Other" category appearing in Table 4 are included a wide range of subjects, each named by a few persons. Among adults with widely varied interests, as well as haziness on the exact character of those interests, such variety might be expected, at least among courses desired. Loose organization of the courses actually taken and haziness of class members about what a particular course was really supposed to cover perhaps resulted in different kinds of listings by different persons for the same courses, the large "Other" category among courses taken being thus accounted for. Looseness or haziness seems more likely among courses such as economics, geography, history, political science, or sociology than among more sharply defined courses such as bookkeeping, dramatic art, sewing, shorthand, or typewriting. The course titles are more descriptive of content in the latter instances. The amount of interest reflected in the social-science courses is possibly a better index of adult interest in orthodox high-school or college social science than of interest in current social problems. Possibly a content and an approach for adults, different from that of the traditional school atmosphere, would be more important in these fields than in vocational fields.

At any rate the foregoing analysis suggests that the activities of the adult classes were largely along vocational lines rather than along lines of general education. If so, such classes could not contribute greatly to the building of a broad scientific, social, and cultural background which would enable the class members to participate more fully and intelligently in civic affairs and to enjoy life more extensively—the objectives which are often advocated for adult education

to help fill an increasing leisure presumably available in the future. Preparation of material and organization of adult education of the kind thus advocated would require more time and resources than were available to the Federal Emergency Education Program, as

TABLE 5  
COURSES TAKEN AND DESIRED BY NEGRO WOMEN, BOTH SINGLE AND MARRIED, ACCORDING TO EDUCATIONAL LEVEL ATTAINED

COURSE	NUMBER OF COURSES REPORTED BY WOMEN IN EDUCATIONAL LEVEL							
	Grade IV or Less		Between Grade V and Entrance to High School		Some High School or Beyond		Total	
	Taken	De- sired	Taken	De- sired	Taken	De- sired	Taken	De- sired
Arithmetic.....	1		6		4		11	
Ballet and tap dancing.....				4		6		10
Barber and beauty work.....			1		3		4	
Bible.....	1		3		1		5	
Bookkeeping.....	1		1		10	2	12	2
Clerical practice.....				1	5	4	5	5
Etiquette.....	7		2	1			9	1
French.....			4	3	3	2	7	5
Geography.....			1			4	1	4
Music.....	4		10	2	11	2	25	4
Nursing.....	1	1	1	1	4	1	6	3
Physics.....			2		3		5	
Piano.....	3		12		7		22	
Sewing.....	2	2	4	1	4		10	3
Shorthand.....	2		1		21	1	24	1
Spanish.....			6	2	5	4	11	6
Spelling.....	1	1	3	2	1		5	3
Typewriting.....	3		5	4	22	4	30	8
Voice-training.....	1		1	4	2	2	4	6
Others.....	7	5	25	9	19	13	51	27
Total.....	34	9	88	34	125	45	247	88

well as more stability in the total program than was reflected in being tossed from pillar to post.

For the purpose of discovering possible differences in the interests of negro and white women and simplifying Table 4, data for negro women were separately tabulated. The small number of negro men supplying data did not justify separate tabulation. The data for negro women appear in Table 5.



A comparison of the data for negro and white women suggests greater proportionate negro interest in Bible, music, nursing, and Spanish, and less in cooking, business English, sewing, shorthand, and typewriting. Interest in some of the latter fields, however, was not lacking among negroes. Preliminary tabulation showed that the interest in stenographic courses was primarily that of single women.

The available data do not warrant extensive generalizations regarding race interests, but they suggest that the similarities of interests between the two races are greater than the differences. This result is probably to be expected where one culture pattern largely determines the activities and the aspirations of both races.

*Summary and conclusions.*—There may be different views regarding the interpretations made in the foregoing pages. However, a few concluding statements of fact seem in order.

1. About two-thirds of the participants in the adult classes were single persons. The women outnumbered the men by more than two to one.
2. Approximately three-fifths of the participants were not over twenty-five years of age, and between two-fifths and one-half were not over twenty-one.
3. Variation appeared in the relative proportions of the two sexes in the different age groups.
4. Roughly a quarter of the married women participating in adult classes reported no children, and an additional quarter reported one child. Married women of foreign nativity reported somewhat more children than did married women of American birth.
5. Slightly more than two-thirds of the American-born participants were born in Chicago, and roughly an additional quarter were born elsewhere in the Middle West. Fewer of the migrants than of the Chicago-born persons were unemployed.
6. Subject-matter interests of participants reflected a rather definite vocational drive, particularly among single women and, to a slightly less extent, among men. Married women showed more interest in fields of leisure and of home concern.
7. The study suggests a fairly substantial scope of interest in certain fields not met by the offerings made.
8. Course interests of negro women were similar to those of white women.

## THE PUBLIC HIGH SCHOOL PRINCIPAL IN NEBRASKA

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### THE PROPORTION OF HIGH SCHOOLS WITH PRINCIPALS

Slightly more than 92 per cent of the 525 accredited public high schools in Nebraska employ persons who bear the title of "high-school principal."<sup>1</sup> This high percentage assumes added significance when it is noted that a little more than three-fifths of the accredited public high schools have pupil enrolments of less than one hundred each and that practically all are integral parts of school systems which employ superintendents of schools.

Obviously, local school boards accept in theory the idea that high schools should be administered by special officers. Whether their acceptance of this point of view is reflected in practice will be the most important revelation of this study of the status of Nebraska high-school principals.

### SOURCE OF THE EVIDENCE

Data for this study were obtained from the annual high-school reports (Form A) and class schedules for 1937-38, which are on file in the office of the state superintendent of public instruction. Since 40 of the 525 accredited schools did not designate principals in their reports and since six schools which have principals are special institutions,<sup>2</sup> this study deals with only 479 schools. For the principals of these 479 schools information concerning types of schools served,

<sup>1</sup> According to information obtained from the office of the state superintendent of public instruction, approximately 95 per cent of all pupils in public high schools attend accredited high schools.

<sup>2</sup> These six schools are the Nebraska School of Agriculture, Curtis, Nebraska, and the five practice teaching high schools.

sex, salaries, college training, educational experience, and teaching and study-hall supervision load will be presented.

#### FINDINGS

*Types of schools served.*—Of the 479 accredited public high schools which have principals, 404 (84.3 per cent) are fully accredited and 75 (15.7 per cent) are minor accredited.<sup>1</sup> All but four of the minor accredited schools enrol fewer than fifty pupils each, and the four exceptions enrol fewer than one hundred pupils each.

Naturally the status of principals of fully accredited schools considered as a group is superior to that of principals of minor accredited schools similarly considered. That this condition is not a function of the factor of size alone was revealed by a study of the data for principals serving fully accredited and minor accredited schools with enrolments of fewer than fifty pupils each. This study showed the following differences in favor of principals of fully accredited schools: (1) a larger proportion of men, (2) slightly higher salaries, and (3) more college training, as evidenced by academic degrees held.

Throughout the remainder of this report data presented will represent principals of both fully accredited and minor accredited schools and will make no distinction between the two types.

As has already been indicated, the small high school is typical of accredited public high schools in Nebraska. In 1937-38 schools with enrolments of fewer than 50 pupils accounted for 28.2 per cent of the 479 schools included in this study; those with fewer than 100 pupils, 62.0 per cent; and those with fewer than 200 pupils, 83.5 per cent. Only 16.5 per cent of the schools had enrolments of 200 or more; only 3.8 per cent, enrolments of 500 or more. The five enrolment groups indicated are treated separately in this study for the

<sup>1</sup> The graduates of fully accredited high schools "are admitted to the University (and to nearly all of the colleges and universities of the United States) without entrance examinations in subjects that are properly certified as completed within these schools." The graduates of minor accredited high schools "may receive from the senior high school eleven units on credentials giving them conditional admission to college."—*Thirty-fourth Biennial Report of the State Superintendent of Public Instruction to the Governor of the State of Nebraska*, p. 179. Lincoln, Nebraska: State Superintendent of Public Instruction, 1937.

purpose of showing how the status of the principal is affected by the size of the school in which he works.

*Proportions of men and women.*—According to Table 1, 58 per cent of the 479 principals in accredited Nebraska public high schools are men and 42 per cent are women. Women are in the majority only in the smallest schools, and the proportion of women decreases

TABLE 1

DATA ON 479 PRINCIPALS IN ACCREDITED HIGH SCHOOLS IN  
NEBRASKA IN 1937-38

	PRINCIPALS IN SCHOOLS WITH ENROLMENTS OF—					
	Fewer than 50	50-99	100-199	200-499	500 or More	All Schools
Men:						
Number.....	53	93	64	51	17	278
Per cent.....	39.3	57.4	62.1	83.6	94.4	58.0
Women:						
Number.....	82	69	39	10	1	201
Per cent.....	60.7	42.6	37.9	16.4	5.6	42.0
Annual salaries:*						
Mean.....	\$829	\$959	\$1,149	\$1,559	\$2,019†	\$1,111
Range.....	\$585-1,305	\$630-1,500	\$765-2,150	\$1,000-2,400	\$2,100-4,176	\$585-4,176
Mean number of years of educational experience:‡						
In present position.....	2.4	3.2	4.8	5.7	11.3	3.9
In all positions.....	6.1	8.1	12.4	13.1	15.1	9.3
Mean number of class periods:§						
Spent in teaching.....	5.3	5.0	4.5	3.2	0.3	4.6
Spent in study-hall supervision.....	1.9	1.7	1.7	1.5	0.1	1.7
Both.....	7.2	6.7	6.2	4.7	0.4	6.3

\*Data on salaries of nine principals are not included, owing to incomplete annual reports. These nine principals are distributed among all five enrolment groups.

† Information about the salaries of five of the principals here was obtained by correspondence.

‡ Basic data on experience in present position were available for all but one principal; on experience in all positions, for 473 of the 479 principals.

§ Data concerning teaching responsibilities of seven principals and study-hall supervision loads of 155 principals are not included, owing to incomplete annual reports. The seven principals, as well as the 155, are distributed among all five enrolment groups.

continually from the smallest schools to the largest. All but 10 of the 61 principals in schools which enrol from 200 to 499 pupils, and all but one of the 18 in schools which enrol more than 500 pupils, are men.

*Salaries.*—On the whole, principals of accredited Nebraska public high schools are poorly paid. Table 1 shows that the mean annual salary of all principals in 1937-38 was \$1,111 and that the range of annual salaries was from \$585 to \$4,176. Mean annual salaries and

range of salaries show an increasing trend from the smallest enrolment group to the largest. Differences among the salary statistics for principals in the first two groups and in the middle group are not pronounced, but they are large for principals in the middle group and the two largest enrolment groups. Compared with the mean annual salary of principals of the immediately preceding enrolment group, the figure for principals in schools which enrol from 200 to 499 pupils is \$410 higher and that for principals in schools which enrol 500 or more pupils is \$1,360 higher. Not only are mean annual salaries much higher for principals in these two large groups, but the limits of the ranges of annual salaries are also decidedly higher.

*College training.*—The Bachelor's degree is the highest degree held by an overwhelming majority of principals in accredited Nebraska public high schools. Eighty-seven and four-tenths per cent of the 446 principals for whom data were available hold only this degree. Most of the remaining principals (12.1 per cent) hold the Master's degree, one principal holds the Doctor's degree, and one holds no degree.

The proportion of principals holding the Master's degree is, as might be expected, greater in the larger schools. All principals in the largest enrolment group have Masters' degrees, compared with 6.5 per cent in the smallest enrolment group and with 5.1 per cent, 7.1 per cent, and 40 per cent, respectively, of those in the next succeeding groups.

Of the 459 principals for whom data were available, 32.7 per cent received their highest degrees from Nebraska teachers' colleges, 27.7 per cent from the University of Nebraska, 23.1 per cent from independent institutions in Nebraska, 16.3 per cent from institutions in other states, and 0.2 per cent (one person) from a municipal institution. Approximately three-fifths of the principals received their highest degrees from institutions supported by the state of Nebraska, and 83.7 per cent received their degrees from institutions of higher learning located in Nebraska.

Study of the percentages for the different institutions and types of institutions revealed no consistent trend from the smallest to the largest enrolment groups. Figures for the two largest enrolment groups show marked increases in the proportions of principals hold-

ing their highest degrees from the University of Nebraska and out-of-state institutions and corresponding decreases in the proportions holding their highest degrees from the other two major types of institutions. Doubtless this condition is explained by the fact that the proportion of principals holding graduate degrees increases rapidly in the larger schools and by the further fact that teachers' colleges offer no graduate work and only one independent institution in the state offers any.

*Educational experience.*—As a group, principals of accredited Nebraska public high schools have had a rather limited amount of educational experience. Table 1 shows that the averages are 3.9 years of experience in their present positions and 9.3 years in all positions that they have held. The mean number of years of experience of principals in their present positions and in all positions increases continuously from the smallest enrolment group to the largest.

*Teaching and study-hall supervision load.*—Principals of accredited Nebraska public high schools devote a major part of each school day to teaching and supervision of study halls. According to Table 1, the mean number of periods spent daily in such activities by all principals is 6.3. Only 7 of the 472 principals for whom data are available have no teaching responsibilities.

No statement is warranted concerning the number of principals who have no study-hall supervision load since a large number of annual reports (155) failed to give information about study-hall responsibilities. In view of the small size of Nebraska high schools and the heavy teaching loads of the principals, it is highly probable that many principals who failed to report study-hall assignments actually have such responsibilities. Data for 324 principals, or approximately 68 per cent of the total, were used in computing the mean number of class periods spent by the several groups of principals in study-hall activities. The proportion of the total number of principals represented by the data is considered sufficiently large to give the figures validity.

A check of class schedules revealed that practically all schools use an eight-period day. In terms of this typical day, principals devote 79 per cent of each school day to teaching and study-hall supervision.

As might be expected, principals in smaller schools devote more time to teaching and study-hall supervision than do principals in larger schools. The length of time spent daily in such activities decreases continuously from the smallest enrolment group to the largest. Some principals in the smallest schools are apparently busy during every period with teaching and study-hall duties. A few principals in the largest schools have no such duties.

#### CONCLUSION

Data presented in this study reveal that the typical principal in accredited Nebraska public high schools is a man. He receives an annual salary of \$1,111; holds only a Bachelor's degree, which he received from a state-supported institution; has occupied his present position for 3.9 years; has been in the teaching profession for 9.3 years; and devotes 6.3 periods daily to teaching and study-hall assignments.

Detailed facts from which the typical principal emerges show that a little more than two-fifths of all principals are women but that few women hold positions in the larger schools; that only 38 per cent of all principals work in schools in which the mean annual salary of principals is more than \$1,000; that only 12.3 per cent of all principals hold graduate degrees; that 83.7 per cent of all principals received their college training in Nebraska institutions; that the average number of years of total educational experience ranges from about six to approximately fifteen, and that the typical principal spends about four-fifths of each school day in teaching and study-hall activities.

The status of principals in minor accredited and small schools is definitely inferior to that of principals in fully accredited and large schools. Size of schools doubtless determines, to a large extent, differences which distinguish principals of minor accredited schools from principals of fully accredited schools, but accreditation also seems to play a part. A study of the data for principals serving schools of different accreditation status but of the same enrolment classification revealed differences in sex, salary, and college training in favor of principals of fully accredited schools. All trends dependent on, or related to, size of school show improvement in status of the principal as size increases.



Obviously the typical principal is a high-school teacher with an administrative title. Low salaries and heavy teaching and study-hall responsibilities indicate that school boards regard the principal largely as a teacher. Whether the principal performs administrative functions to any marked extent is a question outside the province of this study, but the small size of the typical school that he serves and the fact that he serves under a superintendent of schools argue against this possibility. These conditions also seem to indicate that a large majority of accredited Nebraska high schools do not at present need an administrative officer as principal. Such being the case, it is reasonable to conclude that any changes in the status of the Nebraska high-school principal which occur in the near future will probably accompany, and be a fundamental part of, changes in the status of the Nebraska high-school teacher.

## REVELATIONS OF A TESTING PROGRAM IN CURRENT AFFAIRS

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MANY crises, both political and economic, and wars and rumors of war have kept current issues in the spotlight. Nobody will argue the grave and critical nature of developments in recent years. The difficulty for the rank and file of the population, and even for persons who spend a great amount of time studying current affairs, is to understand what is taking place in the current scene and to appreciate its significance. Teachers have realized that young, immature pupils need special and expert help in learning to follow the news and to understand something of the social and the economic factors active in shaping present conditions; and teachers have tried to meet this growing need by giving more time and thought to instruction in current affairs. The development of special school papers, such as the *American Observer*, has provided great help in the systematic teaching of current issues. As never before, perhaps, pupils need special guidance if they are to understand the complicated issues of our times, and it is the obligation of the teaching profession to develop methods and techniques for meeting adequately the demands of the period.

A testing program involving more than twelve thousand pupils has thrown light on the kind and the amount of pupils' knowledge in current affairs.<sup>1</sup> The test included questions concerning names of outstanding personalities, location of places, knowledge of recent trends, and important ideas and facts necessary for understanding current affairs. From the mass of data obtained in that investigation have emerged the following implications which seem helpful in teaching current events.

<sup>1</sup> Julia Emery, "The Background of Current Affairs in September," *School Review*, XLIV (December, 1936), 764-68.

1. In the systematic teaching of current affairs *there needs to be a background of minimum essentials*. A basic difficulty lies in the fact that current affairs are constantly shifting and changing. In the nature of the subject the task of selection of materials can never be finished. There are, however, certain things concerning foreign affairs that pupils need to know. Such facts would include the British policy of balance of power, the breakdown of old Austria-Hungary into the group of small states and their special problems, the idea of the League of Nations, and the constructive work of the International Labor Office. The selection of factual background is a long and tedious process. Only those things should be retained which are essential to an understanding of the current scene. Here is where the new courses break sharply from the courses in European history. In the rigid selection of factual background there is danger of falling into the error of oversimplification. The material must be carefully chosen in order that, on the one hand, overloading with facts and, on the other hand, distortion resulting from cutting away too much background may be avoided. Courses in current events need to fill the main gaps in the pupils' background; at the same time it is desirable to continue discussions of current developments. The best balance seems to be current events based on a foundation of essential background that is much the same from semester to semester.

The Gestalt theory of foreground-background relationship is of great value in organizing the teaching. The immediate foreground is the present world, but this world has meaning and significance only as related to the background of historical, economic, and cultural facts. This background is rather stable and can be taught in a well-organized fashion. It provides the setting of the stage. If this carefully selected background is well established, the shifting foreground of present happenings will have much greater significance. The teacher, planning and working with this concept in mind, supplies order and organization to his presentation. This program eliminates, to a great degree, the haphazard and the seemingly hit-and-miss system of considering current events alone.

In the tests used in this study the wrong as well as the right answers were tabulated in an effort to see what tendencies existed in the mistakes. When some of the typical errors or types of mistakes

are discovered, the plan of teaching can be revised to prevent some of these mistakes. The pupils know much more about Great Britain and France than about other European countries. The farther east in Europe the country, the less the information of the pupils. There is also a tendency to guess on the basis of a vague notion. The pupil's error is often something more or less closely associated with the correct answer rather than something that has no bearing on the question. For example, "Open Door" was correctly applied to China by 53 per cent of the pupils, but to Japan by 28 per cent and to India by only 3 per cent. As the nation alarmed over the decrease in birth-rate, only 21 per cent named France, while more said Italy or Germany. In this instance the pupils confused the idea of decrease with the programs agitating for rapid increases in birth-rate.

2. Besides the task of building the background, *there is the basic problem of objectives*. What should be taught in current affairs? All teachers are familiar with the various objectives. When consideration is given to fundamentals, however, is not the matter of objectives more simple than the selection of materials? The pupils need background in order to understand the current scene. At the same time, they need to learn how to study, how to think objectively, how to follow current developments, and how to continue independently after the course is finished. If this work of giving the background and methods of study is well done, will there be much question of attitudes? Straight thinking, tolerance, and use of suspended judgment will be thus encouraged. Good will toward other peoples will be a result of learning something of their culture, achievements, and problems. Hatred of war and the conviction of the wastefulness of war can be shown more dramatically in the events of the World War and the Civil War in Spain than by any number of general talks. There is much confusion in our thinking on attitudes. The writer's contention is that, if the course is properly planned and the materials are wisely selected, the pupils will develop the attitudes from the experience in the course. Much in the way of feeling tone comes without the pupils' being conscious of acquiring attitudes. This statement naturally does not take into account the multitude of conflicting forces and appeals bombarding the pupils outside the class.

3. The testing program of this study showed *several clear leads for constructive class activities*. First, there is a group of fundamental concepts that pupils need. They have no clear idea of fascism, nazism, or communism, and many pupils show a lack of understanding of the fundamentals of the democratic system. The question of propaganda is another thing that needs direct attention. Next, the pupils have only the vaguest notion of geography. When only 42 per cent recognized that Vienna is in Austria, what chance is there for the discussion of the past and the present troubles of Vienna? The fact is that the present generation of pupils do not know where places are and have little knowledge of maps, although in other respects the new approach in geography has given them much general information.

Another clear approach is made through names. If the school specifically develops an understanding and an appreciation of the great leaders active in world-affairs, the pupils have a basis of understanding. The present Chamberlain government policies are much clearer if the pupils understand the Eden-Chamberlain clash. Emphasis on personalities gives high-school pupils something that they can understand as an introduction to the more abstract policies and fundamental problems.

Repeated studies of the amount of time spent by pupils on their various lessons indicate that they give more time to mathematics than to the social studies. An alert pupil often feels that his general information will be sufficient to enable him to pass. In no high-school course probably is there more difficulty in getting down to specific work than in current-affairs discussions. When the background material has been well organized and presented, the difficulty of getting specific work is greatly reduced. Some teachers give pretests, including a hundred or more points, on rather recent happenings. Such tests furnish valuable checks on the actual learning in the course, for a pupil making A or B in a pretest showing his general fund of information has a bad time explaining a poor mark in the course.

4. In some topics *repetition and drill may bring only meager improvement*. In September about 90 per cent of the pupils understood that the Monroe Doctrine was made by the United States, and there was practically no improvement in the following May. Further repetition of some of the things that the pupils have met repeatedly

through the years obviously bores the learners. Although they do not understand the changes that have taken place in the interpretation of the Monroe Doctrine, little is gained by using more time for discussing it. Probably better results will be attained by apportioning the time to some of the other topics that pupils know less about.

5. *Chronological order is important for understanding.* If pupils can get the feeling that developments are a continuing social process, a big step has been taken. When a few major points and dates are established, with the major sequence of events arranged in between, there is little danger of demanding the memorization of too many dates. Here, as in other matters, balance and perspective must be maintained. If the pupil knows the order of happenings, he has a line of association to give a story meaning.

#### CONCLUSION

The need for teaching international relations and current affairs is real. The prospect of continued crises and problems in world-affairs will mean that schools and teachers must continue to develop means of helping pupils to follow and to understand the course of events. In this task school people need all the cultural education, judgment, and balanced sane thinking that can be mustered. The routine work needs to be organized so that there will be time and energy to read and study the new books and to keep up with such publications as those of the Foreign Policy Association. The obligation here is a real challenge and opportunity. School schedules are being shifted in order that more time may be provided for the pupils to study the present world. All courses in social studies have been more or less changed in recent years to give more time and attention to the world here and now. Such teaching makes heavy demands on the teachers and the schools. At its best, such work is creative, and the achieving of its goals requires the skill of an artist. In a period of bewilderment, tension, and uncertainty, there can be no pretense of knowing it all. The schools are in process of building better methods and techniques for helping pupils gain an understanding of the essential dynamic factors and conditions in world-affairs. The more complex and troubled world-affairs become, the greater the pupils' need for real help and guidance.

## SELECTED REFERENCES ON SECONDARY- SCHOOL INSTRUCTION

### II. THE SUBJECT FIELDS

LEONARD V. KOOS AND COLLABORATORS

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THE same grouping of subject fields is being followed for the lists of references in the February and March numbers of the *School Review* as was used in the cycles of lists published during 1933-38, inclusive. The concept of "instruction" is also the same and includes curriculum, methods of teaching and study and supervision, and measurement. In each subject field the list includes items published during a period of approximately twelve months since the preparation of the list appearing last year.

#### ENGLISH<sup>1</sup>

DORA V. SMITH

University of Minnesota

74. ABBOTT, MARY ALLEN. "Children's Standards in Judging Films," *Teachers College Record*, XXXIX (October, 1937), 55-64.  
Presents children's own standards for judging films, with a plea for avoidance of teacher-imposed standards.
75. CENTER, STELLA S. "The Significance of the Reading Clinic," *English Journal*, XXVII (May, 1938), 380-88.  
Stresses the clinical viewpoint in reading diagnosis and instruction, with emphasis on use of machines for study and training of eye-movements.
76. DRENNON, HERBERT. "Can the Teaching of Literature Be Correlated with the Developing Emotional Life of High-School Students?" *Peabody Journal of Education*, XV (November, 1937), 119-30.  
Urges the importance of recognition by the teacher of the emotional significance of literature in the lives of boys and girls.
77. EBERHARDT, PAUL M. "Composition as Adventure," *English Journal*, XXVII (April, 1938), 323-30.

<sup>1</sup> See also Items 439 (Gray), 441 (Gray), 460 (Witty), 466 (Conrad), 475 (Hanlon), 478 (Jewett), 484 (Swift), and 486 (Tressler) in the list of selected references appearing in the October, 1938, number of the *Elementary School Journal*.



- Describes the motivation of composition work through the school paper so as to afford opportunity for exploring individual interests.
78. EELS, WALTER CROSBY. "Comparative Rankings of Periodicals," *Wilson Bulletin for Librarians*, XII (January, 1938), 318-21.  
Ranks periodicals in order of their usefulness to high-school pupils according to four criteria presented in four previous articles.
79. ELDRIDGE, DONALD A. "Motion-Picture Appreciation in the New Haven Schools," *Journal of Educational Sociology*, XI (November, 1937), 175-83.  
Reviews activities of New Haven schools in developing consciousness of moving-picture standards among high-school pupils.
80. EVANS, DINA REESE. "Report of Speech Survey in the 9-A Grade," *Quarterly Journal of Speech*, XXIV (February, 1938), 83-90.  
Assists teachers in diagnosing pupils' speech habits according to four criteria: (1) adjustment to the speaking situation, (2) symbolic formulation and expression of ideas, (3) phonation, and (4) articulation.
81. FERSTER, TERESA. "An English Laboratory for Freshmen," *English Journal* (College Edition), XXVI (November, 1937), 729-34.  
Describes an attempt made in Freshman English at the junior college in Ironwood, Michigan, to care for students entering with widely differing preparation in English.
82. FINCH, HARDY R. "Film Production in the Schools," *Educational Screen*, XVII (September, 1938), 216-18.  
Furnishes many specific examples of films produced in schools in connection with English and other subjects.
83. GRUMETTE, JESSE. "An Investigation into the Newspaper Reading Tastes and Habits of High School Students," *High Points in the Work of the High Schools of New York City*, XIX (December, 1937), 5-10.  
Traces progress in the development of tastes and habits in the reading of newspapers by Seniors with four years of high-school instruction.
84. HELLER, FRIEDA M., and LA BRANT, LOU L. *Experimenting Together*. American Library Association Bulletin No. 1. Chicago: American Library Association, 1938. Pp. 84.  
Pictures concretely a program of co-operation between English teacher and librarian to bring about a meaningful program in extensive reading.
85. KEREKES, FRANK, and LANG, PAULUS, "Maintaining English Skills," *Journal of Higher Education*, VIII (November, 1937), 435-41.  
Presents a program by which students and faculty of Iowa State College of Agriculture and Mechanic Arts were made "English-conscious."
86. KIRBY-MILLER, C. W., and KIRBY-MILLER, W. A. "What Is Wrong with Freshman Composition?" *English Journal* (College Edition), XXVI

(October, 1937), 625-37; "A New Type of Composition Course," — (November and December), 715-25, 806-12.

Attempts to narrow the broad claims and program of college Freshman composition and to adapt the program to the actual expressional needs of students.

87. MILES, DUDLEY. "The Contributions of Research to Teaching and Curriculum-making in English, June, 1935, through June, 1937. III," *English Journal*, XXVII (June, 1938), 495-506.

Summarizes results of recent studies in the field of high-school reading.

88. NEVILLE, MARK A. "English as a Positive Factor in Correlation," *English Journal*, XXVII (January, 1938), 44-49.

Describes a program by which English was gradually given a positive place in the correlated curriculum of the John Burroughs School in St. Louis.

89. PARKER, ROSCOE EDWARD. *The Principles and Practice of Teaching English*. New York: Prentice-Hall, Inc., 1937. Pp. xii+336.

Discusses in general the philosophy and the problems of teaching English in high school. Devotes a hundred pages to critical essays on English and education from 1531 to 1878.

90. PEASE, KENT. "Hamden's Course in Appreciation of Movies and Radio," *Clearing House*, XII (September, 1937), 39-43.

Describes a course designed to train pupils in discrimination in their choice of films and radio programs.

91. PUNKE, HAROLD H. "The Home and Adolescent Reading Interests," *School Review*, XLV (October, 1937), 612-20.

Urges co-operation of home and school in the adolescent reading program and presents, as evidence of the need, data on the reading habits of high-school pupils in twenty-two high schools in Georgia and Illinois.

92. RAPPAPORT, MITCHELL E. "Literature as an Approach to Maturity," *English Journal*, XXVI (November, 1937), 705-14.

Reports results of an experiment to correlate the reading of the novel with the development and the study of pupil personality.

93. ROBERTS, HOLLAND D. "English Teachers Face the Future," *English Journal*, XXVII (February, 1938), 101-13.

Predicts a moving-away from a program contained within the bounds of subject matter alone toward a more creative attack on the problem of the well-rounded development of the child.

94. ROSENBLATT, LOUISE M., for the COMMISSION ON HUMAN RELATIONS. *Literature as Exploration*. A Publication of the Progressive Education Association. New York: D. Appleton-Century Co., Inc., 1938. Pp. xiv+340.

Treats stimulatingly of the purposes of teaching literature with due regard for social understanding, aesthetic appreciation, and enrichment of personal living.

95. SMITH, DORA V. "Psychology and Methods in the High School and College: English Language, Reading, and Literature," *Review of Educational Research*, VIII (February, 1938), 25-33, 81-87.  
Reviews research in all phases of high-school English from January, 1934, to July, 1937.
96. SMITH, DORA V. "The Contributions of Research to Teaching and Curriculum-making in English, July, 1934, to July, 1937: I. Composition, Grammar, and the Mechanics of English; II. Reading Interests," *English Journal*, XXVII (April and May, 1938), 295-311, 409-20.  
Summarizes the results of recent research in English expression and in literature and recreational reading.
97. STRANG, RUTH. "Improvement of Reading in High Schools," *Teachers College Record*, XXXIX (December, 1937), 197-206.  
Presents a comprehensive plan for setting in motion an all-school program for the improvement of reading in high school.
98. TINKER, MILES A. "Motor Efficiency of the Eye as a Factor in Reading," *Journal of Educational Psychology*, XXIX (March, 1938), 167-74.  
Presents evidence in support of the belief that in general there is no significant relation between the motor efficiency of the eyes and ability to read.
99. VAN CLEVE, CHARLES. "The Teaching of Shakespeare in American Secondary Schools," *Peabody Journal of Education*, XV (May, 1938), 333-50.  
Surveys methods used in teaching Shakespeare in American high schools from 1837 to 1936 and concludes that there are evidences of wide interest in Shakespeare in high schools today.

THE SOCIAL SCIENCES<sup>1</sup>

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In the compilation of the material for this division of the list of selected references, the assumption has been that the material which has appeared during the past year in *Social Studies* and *Social Education* is well enough known to justify omitting it. Furthermore, to have included it would have necessitated omitting much fugitive material the locating of which requires a great deal of time.

100. ADLER, ALFRED CHARLES. "Integrating the Teaching of Modern Foreign Languages with Mental Hygiene and Social Science," *Modern Language Journal*, XXII (March, 1938), 437-43.

<sup>1</sup> See also Item 525 (Hunt) in the list of selected references appearing in the October, 1938, number of the *Elementary School Journal*.

A teacher in the Francis W. Parker School, Chicago, offers a philosophy and a series of anecdotes and concludes that acquaintance with foreign cultures cannot come through translations and that language study is essential in developing a "sense of community."

101. ANDERSON, HOWARD R. "Testing in the Social Studies," *Education*, LVIII (May, 1938), 545-49.

Discusses placement and achievement testing and the use of tests in guidance.

102. ANDERSON, HOWARD R., and LINDQUIST, E. F. *Selected Test Items in World History*. National Council for the Social Studies Bulletin No. 9. Cambridge, Massachusetts: National Council for the Social Studies, 1938. Pp. 94.

A collection of test items in world-history, which originally appeared in the Iowa Every-Pupil Tests, plus a helpful discussion of procedures in test construction.

103. BARRICKLOW, JOHN D. "Practical Steps in Developing Social Intelligence," *Ohio Schools*, XVI (February, 1938), 84-85.

A stimulating account of a classroom procedure having as its prominent purpose the development of social intelligence.

104. BROWN, WILLIAM B. "Recent Curriculum Changes in Los Angeles Which Affect the Social Studies Program," *Southern California Social Studies Review*, XIV (June, 1938), 4-7.

Describes changes made to advance specialized elective studies and flexibility, to increase consideration of life and community problems, and to organize the social-living program in a unified, basic course in guidance and orientation.

105. CURTI, MERLE. "American Intellectual History in the Secondary Schools," *Teachers College Record*, XXXIX (March, 1938), 467-74.

Reviews the scope of the field and suggests several approaches suitable for high-school pupils.

106. DONNALLY, WILLIAMS. "The Haymarket Riot in Secondary-School Textbooks," *Harvard Educational Review*, VIII (March, 1938), 205-16.

An analysis of history textbooks, revealing a preponderance of bias and misstatement of fact with respect to the Haymarket Riot of 1886.

107. EDDY, WILLIAM ALFRED. "Preparing for Citizenship in College," *Harvard Educational Review*, VIII (March, 1938), 217-27.

A description of a required four-year sequence of social-studies courses at Hobart and William Smith Colleges in Geneva, New York.

108. GOETTING, M. L. "Some Trends in Organizing the Social Studies," *Education*, LIX (October, 1938), 87-92.

A review of recent attempts to construct a course in the social sciences without reference to individual subjects as such.

109. GOODHUE, WILLIAM S., and WILSON, HOWARD E. "What Problems of the Pacific Area Are Important?" *Harvard Educational Review*, VIII (May, 1938), 359-65.  
An analysis of the space devoted to Far Eastern topics in the *New York Times* from 1925 through 1935.
110. HALL, HENRY B. "Grade Placement of High-School Texts in Social Studies," *Educational Administration and Supervision*, XXIV (March, 1938), 161-68.  
Reports the results of an experiment in rating senior high school textbooks in the social sciences on the basis of actual pupil understanding of the content.
111. HANUS, PAUL H. "Realistic Teaching of Government and How To Get It," *School Review*, XLVI (November, 1938), 657-66.  
A plea for a realism in the teaching of government that will instill in the pupils a permanent approval of good government and a militant aversion to bad.
112. HARAP, HENRY. "Seventy-one Courses in Consumption," *School Review*, XLVI (October, 1938), 577-96.  
A detailed analysis of thirty-five secondary-school, twenty-six college, and ten adult courses in consumption.
113. HARVEY, C. C., and DENTON, CECIL, F. "Use of Newspapers in Secondary Schools," *School Review*, XLVI (March, 1938), 196-201.  
A report on the returns from two questionnaires, submitted to pupils, teachers, and principals, with regard to the use of newspapers in forty-four senior high schools located in fifteen states.
114. KERCHER, LEONARD C. "Recent Studies of Sociology in the Public High Schools of Michigan," *Journal of Educational Sociology*, XI (March, 1938), 423-36.  
A questionnaire study of the status of sociology as a high-school subject in 130 large schools in 1931 and in 126 large and 106 small schools in 1936.
115. MICHENER, JAMES A. "A Functional Social Studies Program," *Curriculum Journal*, IX (April, 1938), 163-64.  
A description and an interpretation of the courses of study in the secondary school of the Colorado State College of Education.
116. MICHENER, JAMES A. "Sex Education: A Success in Our Social-Studies Classes," *Clearing House*, XII (April, 1938), 461-65.  
An account of coeducational instruction in which a science teacher discussed the physiology of sex and a social-studies teacher discussed marriage.
117. MOSELEY, A. M. "4 Projects in Current History," *Clearing House*, XII (March, 1938), 429-30.  
Brief descriptions of specific procedures utilized in a tenth-grade class.

118. NEVINS, ALLAN. *The Gateway to History*. Boston: D. C. Heath & Co., 1938. Pp. viii+412.  
A more or less popular treatment of numerous aspects of history, emphasizing the richer meanings of the subject and explaining some of its objectives and difficulties. Valuable for teachers of history at any level of instruction.
119. SCHUTTE, T. H. *Teaching the Social Studies on the Secondary School Level*. New York: Prentice-Hall, Inc., 1938. Pp. xiv+584.  
A textbook on the teaching of the social sciences, with special emphasis on the principles of general education involved.
120. WOOD, CHARLES H. "Dover Pupil Committee Plan Upset Civics Routine," *Clearing House*, XIII (September, 1938), 20-21.  
An account of the origin and the functioning of a unique method of combining civic accomplishments and factual knowledge in determining the marks of pupils in four classes in problems of democracy.

## GEOGRAPHY:

EDITH P. PARKER

University of Chicago

121. CARTER, HARRIET. "Saving Our Soils. A Unit of Study for Junior and Senior High Schools," *Journal of Geography*, XXXVII (November, 1938), 308-18.  
A detailed outline for the study of soil conservation. Includes an excellent bibliography.
122. CUNDALL, L. B. "Cambridge School Certificate Geography in 1939," *Journal of Education* (London), LXX (October 1, 1938), 628-30.  
Discusses the type of geography examination given candidates for school certificates.
123. DAVIS, S. G. "Visual Aids to the Teaching of Geography," *Geography*, XXII (September, 1937), 213-15.  
Stresses the need for greater correlation and sequence in the planning of visual aids for geography-teaching.
124. DREILING, LILLIAN. "Economic Geography for All Students," *High Points in the Work of the High Schools of New York City*, XX (March, 1938), 69-70.  
Discusses reasons why economic geography should be included in the curriculum for academic pupils.
125. *Education*, LVIII (January, 1938), 258-306.  
The whole issue is devoted to geography. The articles of special interest to high-school teachers include the following: "Geography in International Relations"  
\* See also Item 538 in the list of selected references appearing in the October, 1938, number of the *Elementary School Journal*.

- tions," by Wallace W. Atwood; "Geography in a British School," by Jane E. Paterson; "St. Louis: A Study in Urban Geography," by Lewis F. Thomas; "Map Making—A Sketch," by C. A. Burkhart; "The Home County as a Geography Unit," by Harriet Smith; "Conservation as a Unit of Study in Geography," by George T. Renner; "Palestine of Today," by E. Ray Casto; "Geography Textbooks at the College Level," by Stephen S. Visher; "The Distinctive Contributions of the Geographic Point of View," by Willis B. Merriam.
126. EISEN, EDNA E. "Field Work in Junior and Senior High School," *Journal of Geography*, XXXVII (February, 1938), 75-77.  
Describes beneficial results of field work.
127. EISEN, EDNA E. "Use of Silhouettes," *Journal of Geography*, XXXVII (October, 1938), 284-85.  
Describes a novel use of transparencies and silhouettes for window decorations in the geography classroom.
128. JESSOP, GRACE F. "Study Guides," *Journal of Geography*, XXXVII (September, 1938), 243-46.  
Shows how the use of effective study guides enables a student to become an independent worker.
129. KEHOE, R. J. "High School Travel Clubs," *Journal of Geography*, XXXVII (March, 1938), 109-11. (Also in *Secondary Education*, VII [February, 1938], 40-42.)  
Suggests ideas for organizing and conducting travel clubs.
130. KLEIN, JACOB. "Visual Aids in Economic Geography," *High Points in the Work of the High Schools of New York City*, XX (May, 1938), 55-59.  
Suggests ways of securing, organizing, and using illustrative materials of all kinds.
131. LACKEY, EARL E. "Geography as Related to Secondary Education," *School and Society*, XLVII (May 14, 1938), 622-26. (Part of this article also in *Secondary Education*, VI [December, 1937], 215-17.)  
Discusses the problems which arise when geography courses are added to a high-school curriculum.
132. "Local Studies," *Geography*, XXIII (September, 1938), 177-86.  
Compiled by members of the Standing Committee for Geography in Secondary Schools of the English Geographical Association. Summarizes points raised in a number of discussions on local geography.
133. NIXON, ROBERT B. "College Geography Textbooks," *School and Society*, XLVII (January 22, 1938), 116-20.  
A critical analysis of college textbooks.
134. RENNER, GEORGE T., and CONRAD, E. LORRAINE. "Geographic Concepts in Secondary School Education," *School and Society*, XLVII (January 1, 1938), 6-11.



Discusses the major contributions of geography and the criteria to be used in selecting any subject matter in social science purporting to be geographic.

135. RIDGLEY, DOUGLAS C. "Geographic Principles in Economic Geography," *Business Education World*, XIX (November, 1938), 205-7.  
Defines and illustrates by specific examples the terms "geographic principle" and "geographic factor."
136. STRONG, HELEN MABEL. "The National Significance of Soil Conservation," *Journal of Geography*, XXXVII (September, 1938), 238-43.  
Discusses the basic connection between the field of physical and human geography and that of soil conservation.

#### SCIENCE<sup>1</sup>

WILBUR L. BEAUCHAMP  
University of Chicago

137. BARNARD, J. DARRELL, and SELBERG, EDITH M. "Student Reactions to a Program of Sex Instruction," *Science Education*, XXII (April, 1938), 176-80.  
Presents data on pupils' reactions and teachers' recommendations concerning the value of sex instruction.
138. FLOYD, OLIVER R. "General Science as Preparation for the Study of Biology, Chemistry, and Physics," *Journal of Educational Research*, XXXI (December, 1937), 272-77.  
Presents the results of a study undertaken to discover whether pupils who have taken courses in general science succeed better in later courses in science than pupils who have not taken such a course.
139. HALL, CARROL C. "Trends in the Organization of High School Chemistry since 1920," *School Science and Mathematics*, XXXVIII (October, 1938), 766-72.  
Presents an analysis of reports of committees, articles appearing in periodicals, courses of study, and high-school textbooks to show the trends in the teaching of chemistry.
140. LAUWERYS, J. A. "Reflections and Science Teaching in the U.S.A.," *Science Education*, XXII (March and April, 1938), 107-12, 167-70.  
Contrasts the teaching of science in English schools and in American schools.
141. "The Need for a Twelve-Year Science Program for American Public Schools," *Science Education*, XXII (February, 1938), 51-75.  
A symposium consisting of five papers, in which many angles of the problem are considered.

<sup>1</sup> See also Item 582 (Ebel) in the list of selected references appearing in the November, 1938, number of the *Elementary School Journal*.

142. PRESTON, CARLETON E. "The Science Column," *High School Journal*, XXI (November, 1938), 266-69, 278.  
Contrasts stated objectives of science courses with common practices.
143. RANSOM, SARAH BENT. "How the Interests of Parents May Be Increased by Means of Student Projects," *School Science and Mathematics*, XXXVIII (April, 1938), 356-63.  
Suggests methods of interesting the parents in the work of the science classes.
144. SHARPE, PHILIP B. "Why Not Teach the Scientific Method?" *Science Education*, XXI (December, 1937), 235-40.  
Presents a method for teaching pupils the scientific method.
145. STONE, CHARLES H. "Some Modern Methods for Teaching Science," *School Science and Mathematics*, XXXVIII (February, 1938), 146-62.  
Presents many practical suggestions for various aspects of teaching in science classes.
146. WATKINS, RALPH K. "The Future of the Special Sciences in the Senior High School," *School Science and Mathematics*, XXXVII (December, 1937), 1089-96.  
Discusses the falling enrolment in the special sciences and the probable future trend in these sciences.
147. WEBB, HANOR A. "The High School Science Library for 1937-8," *Peabody Journal of Education*, XVI (September, 1938), 121-37.  
Presents the fourteenth annual list of titles of books selected for their usefulness in high-school science classes.
148. ZAPP, ROSALIND M. "Superstitions of Junior High School Pupils," *Journal of Educational Research*, XXXI (February, 1938), 435-46.  
Presents the results obtained on the Maller and Lundeen superstition test and the effects of instruction on the beliefs identified.

## MATHEMATICS

ERNST R. BRESLICH  
University of Chicago

149. ALLEN, J. ELL. "Some Psychological Phases of Student Success in High School Mathematics," *Mathematics Teacher*, XXX (November, 1937), 322-25.  
Suggestions for the removal of some obstacles that block the pupil's road to success.
150. AUSTIN, C. M. "Suggestions for Teachers of Mathematics," *Mathematics Teacher*, XXX (December, 1937), 360-62.  
Attention is called to the importance of certain teaching functions and procedures which will improve the work of the teacher.

151. BENNETT, ALBERT A. "Algebra as a Language," *Mathematics Teacher*, XXX (November, 1937), 307-13.  
The learning of algebra is compared to the learning of a new language.
152. BRAND, LOUIS. "The Significance of Mathematics in the Physical Sciences," *School Science and Mathematics*, XXXVIII (June, 1938), 607-13.  
A brief discussion of the meanings of various non-Euclidean geometries and of various algebras which play an important part in modern science.
153. BRYANT, CARROLL W. "Mathematics in Relation to Physics," *Mathematics Teacher*, XXX (December, 1937), 363-65.  
Lists topics of algebra in which pupils taking physics are generally deficient. A closer correlation between mathematics and physics is recommended.
154. BUTTERWECK, JOS. S. "How Much Progress in Secondary School Geometry?" *School Science and Mathematics*, XXXVII (November, 1937), 911-19.  
An analysis of thirty-three textbooks in geometry discloses little change in organization of the subject.
155. CHRISTOFFERSON, H. C. "Geometry a Way of Thinking," *Mathematics Teacher*, XXXI (April, 1938), 147-55.  
Gives interesting examples to show how the type of thinking emphasized in demonstrative geometry is used in nongeometrical situations.
156. COWLEY, E. B. "Ratio and Proportion in High School Curriculums," *School Science and Mathematics*, XXXVII (December, 1937), 1079-88.  
From an examination of textbooks in high-school mathematics and in other subjects, from an analysis of published articles, and from a questionnaire, conclusions are drawn concerning the pupils' grasp of relationships of measurable quantities as revealed by ratio and proportion.
157. EDINGTON, WILL E. "Vitalizing Mathematics," *National Mathematics Magazine*, XII (October, 1937), 27-38.  
A discussion of five suggestions for vitalizing mathematics.
158. GIVENS, W. B. "The Trisection of an Angle," *American Mathematical Monthly*, XLIV (August-September, 1937), 459-61.  
This famous problem is solved by using an auxiliary curve. Bright high-school pupils will be interested in the solution. An adequate bibliography is appended to the discussion.
159. HAGEN, HENRY H., and SAMUELSON, NORMAN L. "Preparation for Teaching Secondary-School Mathematics," *Mathematics Teacher*, XXXI (May, 1938), 201-4.  
Training a person for the teaching of mathematics should comprise a general education, specialization in mathematics, professional education, familiarity with related subjects, practice teaching, and wide nonacademic experiences.

160. HARTMANN, GEORGE W. "Gestalt Psychology and Mathematical Insight," *Mathematics Teacher*, XXX (October, 1937), 265-70.  
How certain basic conceptions of Gestalt theory could be used in the teaching of mathematics.
161. HARTUNG, MAURICE L. "Some Problems in Evaluation," *Mathematics Teacher*, XXXI (April, 1938), 175-82.  
A theory is presented which may enable the teacher to determine the values of mathematical instruction.
162. KEMPNER, AUBREY. "On the Need of Co-operation between High School and College Teachers of Mathematics," *Mathematics Teacher*, XXXI (March, 1938), 117-23.  
Attention is called to the deplorable lack of co-operation between high-school and college teachers. Proposals for reforms are classified in two categories, which are discussed in detail.
163. LAZAR, NATHAN. "The Importance of Certain Concepts and Laws of Logic for the Study and Teaching of Geometry," *Mathematics Teacher*, XXXI (March, 1938), 99-113.  
The article is the first chapter of a thesis. It analyzes the concept of the converse of a geometric proposition and proposes a new definition, which has some advantages over the traditional definitions given in textbooks.
164. LEISENRING, KENNETH B. "Geometry and Life," *Mathematics Teacher*, XXX (November, 1937), 331-35.  
Contends that the solution of the problem of strengthening the position of geometry in the schools is not to be found in making the course in geometry a course in general thinking.
165. LLOYD, D. B. "Bibliography of Popular Mathematics," *School Science and Mathematics*, XXXVIII (February, 1938), 186-93.  
A bibliography of materials suitable for mathematics clubs and libraries in high schools.
166. MCLEOD, D. "Problem Solving in Algebra," *Mathematics Teacher*, XXX (December, 1937), 371-73.  
An analysis of the pupil's difficulties in the process of solving verbal problems by algebraic methods.
167. MILLER, FLORENCE BROOKS. "Out of the Past," *Mathematics Teacher*, XXX (December, 1937), 366-70.  
A play presented by a ninth-grade class in mathematics, which features the use of mechanical devices for calculating.
168. MILLER, G. A. "Mathematical Myths," *National Mathematics Magazine*, XII (May, 1938), 388-92.  
Mathematical myths, the author says, are numerous in our literature. The pupil should, therefore, be warned not to accept statements relating to the history of mathematics without making a reasonable effort to verify them.

169. MOORE, CHARLES N. "Mathematics and Science," *School Science and Mathematics*, XXXVIII (January, 1938), 41-52.  
An excellent discussion showing, by means of interesting examples, the service rendered by mathematics to the sciences because mathematicians do not confine themselves to problems having immediate practical applications.
170. MULLEN, FRANCES A. "Fugitive Material," *Mathematics Teacher*, XXXI (May, 1938), 205-8.  
Suggestions are given for collecting and filing materials to be used in enriching courses in mathematics.
171. NICHOLSON, G. H. "The Teaching of Solid Geometry at the University of Vermont," *Mathematics Teacher*, XXX (November, 1937), 326-30.  
An attempt to improve the teaching of solid geometry by aiding the learner in the attainment of fifteen major objectives of the course.
172. NYGAARD, P. H. "Co-ordination of Elementary Arithmetic Teaching with the Methods of High School Mathematics," *School Science and Mathematics*, XXXVIII (April, 1938), 370-75.  
Some interesting suggestions for the modification of methods of teaching arithmetic in the elementary school. These suggestions, if followed, would produce a better co-ordination of arithmetic and algebra.
173. OLDS, EDWIN G. "Let's Check the Hypothesis," *Mathematics Teacher*, XXX (December, 1937), 358-59.  
Presents the view that the decline in the popularity of mathematics may be accounted for by the population's change of attitude toward virtues of the past, which are now regarded as old-fashioned and outmoded.
174. PATERSON, EDITH BRUCE. "Everyman's Visit to the Land of Mathematicians," *Mathematics Teacher*, XXXI (January, 1938), 7-18.  
A mathematics play written for junior high school pupils. Introduces famous mathematicians of antiquity and the Middle Ages and their contributions to geometry, arithmetic, and algebra.
175. PORTER, RUTHERFORD B. "The Effect of Recreations in the Teaching of Mathematics," *School Review*, XLVI (June, 1938), 423-27.  
An experiment carried on with two comparable groups indicates that recreations, when made a feature in teaching mathematics, increase achievement and improve the attitude of the pupil toward the subject.
176. REEVE, WILLIAM D. "The Place of Mathematics in Modern Education," *Scripta Mathematica*, V (January and April, 1938), 23-31, 111-16.  
A complete statement of valid reasons for teaching mathematics is followed by an outline of the work in mathematics of junior and senior high schools.
177. RICHTMEYER, CLEON C. "A Course in Applied Mathematics for Teachers of Secondary Mathematics," *Mathematics Teacher*, XXXI (February, 1938), 51-62.

A study to determine the need for a course in mathematics which stresses applications and to decide what applications would be of importance to teachers of mathematics. Seven units are outlined, each dealing with the applications in a particular field.

178. RITER, H. E. "The Enrichment of the Mathematics Course," *Mathematics Teacher*, XXXI (January, 1938), 3-6.

Makes suggestions of ways of enriching mathematics by historical discussions, projects, mathematics clubs, and mathematical recreations.

179. RUSSELL, DAVID W. "Introducing Mathematical Concepts in the Junior High School," *School Science and Mathematics*, XXXVIII (January, 1938), 6-19.

A plan is described which makes use of interesting pictures to introduce mathematical concepts and topics to junior high school pupils.

180. SCHAAF, W. L. "Required Mathematics in a Liberal Arts College," *American Mathematical Monthly*, XLIV (August-September, 1937), 445-53.

An article full of stimulating suggestions which justify the teaching of mathematics at the college level. The arguments presented apply equally to secondary-school mathematics.

181. SPEAR, JOSEPH. "Mathematics—To Reason Not Just To Do," *School Science and Mathematics*, XXXVIII (April, 1938), 402-10.

A plan is presented to simplify the performance of the processes with arithmetic and algebraic fractions and the solution of fractional equations. The objective is to aid the pupils in attaining understanding of the reasons underlying the processes.

182. TURNER, CLAUDE F. "What Need for Mathematics in Grade VIII?" *School Review*, XLV (October, 1937), 592-601.

A study to determine the mathematics functioning in the school life and out-of-school life of eighth-grade pupils. The findings disclose much that is of no importance in child life, much that is socially beyond the average pupil, and a lack of emphasis on some mathematics which the pupil needs.

183. ULMER, GILBERT. "Teaching Geometry for the Purpose of Developing Ability To Do Logical Thinking," *Mathematics Teacher*, XXX (December, 1937), 355-57.

States that improvement of the quality of the pupil's thinking should be an important objective of teaching geometry. Discusses ways of attaining this objective.

184. WREN, F. L. "The Concept of Dependence in the Teaching of Plane Geometry," *Mathematics Teacher*, XXXI (February, 1938), 70-74.

A plea for greater recognition of the concept of functional dependence. Illustrates how from a given construction problem additional construction problems may be derived.

## FOREIGN LANGUAGE

FRANCIS F. POWERS

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185. ARNDT, C. O. "Grammar or Culture?" *School and Society*, XLVII (June 18, 1938), 794-96.  
The relatively short time spent by the American student in learning a foreign language compared with the time spent by the European student would, according to the author, warrant greater effort in developing a "functional reading ability . . . and understanding of a foreign culture rather than a mastery of grammar fundamentals."
186. BUDA, ROBERT. "Motivation in Learning French," *High Points in the Work of the High Schools of New York City*, XX (March, 1938), 60-61.  
A survey of 2,745 students of French shows that the majority study the language in order to learn "to speak French." The teacher's problem is to devise effective techniques for achievement of the reading objective.
187. COCHRAN, EMORY E. "Mastering German Idioms," *Modern Language Journal*, XXII (January, 1938), 274-76.  
Emphasizes mastery of idioms of a foreign language as conducive to a real understanding of the language.
188. DIDIER, FRED B. "An Experiment in Foreign Correspondence," *Baltimore Bulletin of Education*, XV (January-February, 1938), 101-3.  
Correspondence with students of English in France shows that the mistakes in English grammar made by the foreign students are often the same errors which American students make in French.
189. ENGEL, E. F. "The Broadcasting of Modern Foreign Languages in the United States: Second Survey," *Modern Language Journal*, XXII (May, 1938), 626-28.  
Tabulates the radio stations in the United States which were broadcasting modern foreign languages in 1937-38.
190. ENGELBERT, ARTHUR F. "Foreign Language Instruction and the European Muddle," *School and Society*, XLVII (May 21, 1938), 669-71.  
Warns the foreign-language teacher against allowing political convictions regarding foreign affairs and foreign propaganda to enter classroom work.
191. FESS, G. M. "The Neuter in Modern French," *Modern Language Journal*, XXII (May, 1938), 621-23.  
Contradicts the fallacy that the neuter no longer plays an important part in the modern French language and gives a number of examples of pronoun forms for nonpersonal expressions.
192. GLENDENNING, GWENDOLEN, and CURTIS, WINNETTE. "A Survey of the Ideas and Methods Used by Westchester County Teachers of Foreign Language," *Clearing House*, XII (May, 1938), 547-50.



Presents teacher reactions to (1) the question of when to begin a language, (2) prognostic tests, (3) objective tests, and (4) classes for pupils of low ability. Contains helpful suggestions for enlivening the study of languages.

193. HADSEL, FRED L. "High School Latin and College Grades," *School and Society*, XLVIII (November 5, 1938), 602-3.

Marks of Freshman students at Miami University, Oxford, Ohio, on tests of intelligence, English, spelling, and reading show that in most instances students having had more than one year of high-school Latin attained superior ratings.

194. HIEBLE, JACOB. "Language Learning through Extra-curricular Activities," *Modern Language Journal*, XXII (May, 1938), 584-85.

Suggests extra-curriculum activities to supplement limited class periods in foreign language.

195. PERRY, CHESTER DWIGHT. "A Defense of Modern Foreign Languages—With Reservations," *Modern Language Journal*, XXII (March, 1938), 422-28.

A description of the six-year French course of the Fountain Valley School at Colorado Springs, Colorado, which emphasizes the reading assignment and the isolation of grammar work.

196. POND, FREDERICK L. "Influence of the Study of Latin on Word Knowledge," *School Review*, XLVI (October, 1938), 611-18.

Significant conclusions of investigations reported in this article are that "intelligence occupied a position of maximum importance in the acquisition of vocabulary knowledge on the part of those . . . who had engaged in Latin study" and that "the matching of pupils on the basis of intelligence, sex, age, semesters in school, and school achievement indicated little, if any, difference in vocabulary knowledge on the part of Latin and non-Latin pupils."

197. STOCK, H. "The Old-Type Test in Modern Languages and the New," *High Points in the Work of the High Schools of New York City*, XX (April, 1938), 52-58.

A defense of the "old-type" test which favored the grammar-translation method rather than the reading method which the "new type" exemplifies.

198. WHITE, EMILIE MARGARET. "Maintaining Professional Interest," *Modern Language Journal*, XXII (May, 1938), 577-80.

It is important that the foreign-language teacher maintain a progressive attitude and a determination to make his subject of current interest to the student if he is to meet the present social demands and justify the place of foreign language in the new curriculum.

199. YALLER, RAY. "A Survey of Causes of Student Failure in Language Study," *High Points in the Work of the High Schools of New York City*, XX (June, 1938), 12-23.

Results of a survey of teachers and students to determine causes of pupils' disinterest in foreign languages and the decline in enrolment in foreign-language classes. Pupils and teachers agreed that large classes which prevent individual instruction are a cause of failure.

# Educational Writings

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## REVIEWS AND BOOK NOTES

**FISCAL AND OTHER SCHOOL CONTROLS.**—A new approach to the problem of the relations which exist, and which should exist, between schools and municipal governments is presented in a book<sup>1</sup> by two members of the faculty of the University of Chicago. Perhaps one thing that makes the approach to the problem interesting is the fact that Professor Henry is a member of the faculty of the Department of Education and Professor Kerwin a member of the Department of Political Science. Students of school administration will recognize this problem as primarily one of fiscal independence versus fiscal dependence of boards of education. It is interesting to see that these two departments of a university have co-operated on a problem where there has been some conflict in points of view.

School administrators have held that, on account of the unique function of education and its general importance to the state, schools should be administered by an authority "entirely free from the control or influence of local public officials" (p. vii). This point of view has applied particularly to final control over school revenues. Political scientists, on the other hand, have held that "effective administration, particularly sound fiscal administration, can be best secured by the closer co-ordination of schools and municipal governments" (p. vii).

After an introductory chapter which sets forth the general problem, there is an excellent chapter on "The Legal Basis of School and City Relationships" and another on "The Selection of Boards of Education." These two chapters furnish background for the succeeding chapters, which deal with the actual relations existing between school and city governmental agencies. The description of these relationships is based on actual visits to 33 of the 191 cities of the United States having populations of 50,000 or more at the last census. After the authors had made preliminary visits to four cities, a conference of forty leading representatives of educational and public administration from educational institutions and city school systems in the central and eastern states was called. It was at this conference that suggestions were made which led the authors to confine their work to cities with populations of 50,000 or more and to have the study include more than mere fiscal relationships.

In the thirty-three cities visited interviews were held with school officials,

<sup>1</sup> Nelson B. Henry and Jerome G. Kerwin, *Schools and City Government: A Study of School and Municipal Relationships in Cities of 50,000 or More Population*. Chicago: University of Chicago Press, 1938. Pp. xii+104. \$1.50.

officials of bureaus of municipal research, city officials, officers of city agencies and taxpayers' associations, and leading citizens familiar with local school and municipal relationships. In about thirty cities the results were checked by local branches of the National League of Women Voters. The investigators usually spent two or three days in a city. There were no statistical comparisons, and the conclusions stated in the book were reached on the basis of what might be called the judgment of competent observers.

It is shown in the study that, of the 191 cities with populations of 50,000 or more, 92 school systems were fiscally dependent on some branch of either the county or the city government, whereas 99 of the cities had fiscally independent school systems.

Perhaps the most interesting of the conclusions drawn by the authors of this book is that the politics which now beset schools are just as frequently injected into the systems by school-board members as by representatives of legislative or executive branches of the political government. It is further pointed out that the investigation indicated that no particular structural pattern of school and city relationships constitutes a dependable safeguard against politics in the schools. In elaborating this conclusion, the authors point out that, where independent school systems are subjected to political interference from municipal authorities, the results may be worse than in dependent school systems; since the school board has full power, the politicians have no responsibility for the consequences of their acts. It is further pointed out that separate maintenance for schools may hinder and certainly does not promote the co-ordination of school and municipal endeavors in other areas of common responsibilities of the community.

The authors also report evidence which leads them to believe that fiscal dependence encourages co-operation between city and school governments and that no greater continuity of policies is possible in independent than dependent cities. They report that examples of disruption of well-conceived educational plans are more common among independent than among dependent school boards. In applying the conclusions of the book to present-day practice, the authors reach a final conclusion which does not differ radically from well-conceived opinion in the fields both of city school administration and of political science. This suggestion the authors state in the following words:

In the present situation one cannot help feeling a healthy respect for the opponent of a highly centralized plan of control over school and municipal functions, however much one may believe that his fear is exaggerated. These opponents, perhaps comprising the largest part of the voting population in most cities, will have to be convinced by the improved practices of the municipal authorities that govern in the communities in which they live [p. 97].

As one looks at the list of thirty-three cities visited and thinks of the forces that operate to make schools effective or ineffective in cities such as Chicago, St. Louis, Cleveland, and others on the list, it appears that, after all, fiscal independence or dependence may be a relatively small factor in comparison with the big economic and political forces which have operated in those cities during the

five-year period covered by the study. The authors of this study would perhaps admit that no particular form of organization, in and of itself, insures efficiency in the field of government. They would perhaps likewise admit that more important, possibly, than fiscal dependence or independence in determining the degree to which a city will support its public schools are such factors as the cultural background of the people, their economic ability, their civic honesty, the quality of their leadership, and the general spirit of progress in the community.

Chicago itself is listed as having a fiscally independent school board. It is, of course, fiscally independent according to the definition used by the authors, but in many ways the Chicago schools have been linked to the city government with chains of tax insufficiency and political manipulation which may represent stronger controls than the most stringent provisions in any city charter for the approval of school budgets by the municipal authorities.

In spite of the fact that this comparison of fiscally independent and fiscally dependent cities may not rest on observations which are, to any great degree, scientific, the book performs a real service in analyzing the problem, in critically evaluating previous studies, in presenting a picture of the legal basis of school control in cities with populations of more than fifty thousand, in pointing out the need of co-operation between school and municipal authorities, and in showing the ominous extent to which politics of the bad sort have entered into the administration of schools with all known types of administrative control.

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**MAKING SCHOOL ATTENDANCE WEATHERPROOF.**—Studies have been made and articles have been written on the need, the equipment, and the cost of pupil transportation. Numerous attempts have been made to estimate the quantity of transportation necessary in any area. Time limits and optimum distances of travel to and from school have been suggested arbitrarily, unsupported by scientific studies, and the suggested distances have been changed later because of changes in road-surfacing, the motorization of vehicles, and improvement in their power and speed. A study by Lambert<sup>1</sup> shows the unreliability of estimating the amount of transportation service needed on the basis of general factors such as average daily attendance, number of pupils transported, or area of the school unit.

Lambert's study is the climax of many scientific efforts in the field of pupil transportation. His report is a thorough and critical analysis of many previous studies, to which he has added his own investigations of national conditions and of conditions in a number of counties in Utah. The author's point of view is indicated by the following quotation: "The transportation of school children at

<sup>1</sup> Asael C. Lambert, *School Transportation*. Stanford University, California: Stanford University Press, 1938. Pp. xiv+124. \$3.00.

public expense can no longer be considered simply an activity supplementary to our main educational program; it is itself a large element in that program" (p. 1).

He goes on to say that growth in transporting children to school has been coincidental with increasing interest in the ideal of providing more opportunity for all children in rural and urban communities. Transportation systems should be set up in harmony with discovered principles, which should take into consideration the school organization, the travel distances, the time spent on the road, and the ways of resolving such difficulties as poor road patterns, traffic, weather, topography, or improper road surfaces. The author's theoretical optimum area would approach a square of from sixty to sixty-four square miles in size.

The study has merit in that it proposes sound basic principles for school administrators who are concerned with the complex problems of setting up necessary transportation services. The function of a state division for the supervision of school transportation is defined. The author lists the factors which contribute to a determination of the necessary amounts of transportation in a given region. The book abounds with stimulating ideas.

One qualification of the modern school administrator is insight into the significance of pupil-transportation service. Another is the ability to direct and manage the transportation so that social progress will be made toward an equitable provision of educational advantages, with conservation of the safety and the comfort of the pupils who are transported. The author has made a practical contribution in this book toward that ideal. School administrators who read it should appreciate more deeply the possibilities of using transportation for a more complete educational service to the pupils in their communities.

*University of North Dakota*

A. V. OVERN

**A NEW APPROACH TO THE TEACHING OF THE SOCIAL STUDIES.**—What to teach in the social studies and how to select and organize the abundant instructional material available are important questions to school administrators, supervisors, and teachers. To persons engaged in the training of social-studies teachers in colleges and universities, these questions are transcending in importance the older, narrower conception of method.

The influential report of the Commission on the Social Studies has, in no small degree, been responsible for the change in emphasis. One of the important recommendations contained in this report is that social-studies programs should be constructed for each region in the United States. According to the recommendation of the commission, the program developed should be related closely to the chief economic, social, and political activities of the region.

A pioneer study emphasizing the regional point of view has been published.<sup>1</sup>

<sup>1</sup> A. C. Krey, *A Regional Program for the Social Studies*. New York: Macmillan Co., 1938. Pp. xiv+140. \$1.25.

The monograph is the work of the chairman of the Commission on the Social Studies. With the co-operation of graduate students at the University of Minnesota, the author presents a program for the region centering in Minneapolis. It may be considered, however, as a model and a type for any similar agricultural region the chief activities of which are concerned with dairying and the production and the processing of small grains.

The book contains five chapters, the first two serving as a philosophical background for the regional program, which is presented in chapter iii. Although the program is designed for a region, the author's conception of the social studies is by no means narrow. The underlying philosophy is that which conceives of society as a "seamless web." This web, as Krey describes it, is "more like a mass of quivering protoplasm than like an inanimate network. . . . This web of social relationship is as wide as the world and as deep as time" (p. 4).

The program in general is based on the principle of vertical integration. A convincing argument is presented that this principle of organization is superior to others which have been proposed or which are in vogue. The cycle plan in particular, according to the author, is responsible for much of the lack of interest now obtaining in the required high-school courses in American history and government.

Only one of the nineteen studies made by graduate students is contained in the monograph. The rest are unpublished studies of the University of Minnesota. The reviewer is impelled to express the wish that at least some of the other studies had been included. The monograph, in the reviewer's opinion, suffers somewhat from the fault that it is not specific enough. Nonetheless, the book points out the way to similar studies and resulting programs for other regions.

It occurs to the reviewer that here is offered a fruitful field of research and service which other universities might promote among graduate students jointly in their education and social-science departments. To be of the most benefit, these studies should be undertaken with the co-operation of the public-school authorities of the region in which they are located. For this reason, if for no other, Krey's excellent book deserves careful study by all school administrators, supervisors, teacher trainers, and teachers of the social studies.

R. R. RYDER

*Purdue University*

RELATION OF READING ABILITY TO MEASURED ACHIEVEMENT IN HIGH-SCHOOL SUBJECTS.—The great interest of high schools and colleges in remedial and corrective reading is motivated, in large measure, by the belief that reading ability is an important factor in scholastic achievement. Most persons have concluded, on the basis of general observation, that there is a close relation between reading and success in the various subjects of study. It is altogether possible, however, that the apparent correlation is due to the influence of such factors as chronological age and mental age. The relation existing when these two im-



portant influences are held constant has received little attention from persons investigating reading problems. Therefore, a recent Doctor's dissertation,<sup>1</sup> concerned with the association between reading ability and academic achievement under conditions in which both chronological age and mental age were carefully controlled, is designed to make a definite contribution to the literature on reading at the secondary-school level.

The study consists of four main parts—introduction, statement of procedure, analysis of findings, and summary and conclusions—and ends with a bibliography of thirty-six references. The data analyzed are the scores on reading and achievement tests made by three hundred ninth-grade children in the John Simpson Junior High School, Mansfield, Ohio. The reading-test scores were derived from four standardized silent-reading tests. The reading skills investigated were reading comprehension, reading rate, power of comprehension, location of information, and paragraph organization. The achievement-test scores were secured with the Cooperative Tests in English, literary acquaintance, general science, elementary algebra, general mathematics, and Latin. The intelligence-test data were obtained by administering the Revised Stanford-Binet Scale to each of the three hundred pupils in the investigation.

The statistical procedure employed is an adaptation of the method of analysis of variance. The investigator set up a generalized matched-group method involving twenty-four categories based on a combination of mental-age and chronological-age divisions. A thorough appraisal of the unusual method adopted in this study would call for a more extended commentary than is possible in this review, but the procedure seems adequate, on the whole, for showing the significance of the differences in the achievement of groups of good readers and poor readers when the effect of chronological age and mental age is removed.

The findings indicate that the degrees of relationship existing between the several aspects of reading ability and ninth-grade achievement vary widely. The different reading abilities, as measured by the standardized tests, were highly related to achievement in literary areas. They were not so highly related to achievement in other subject-matter areas, although there was much evidence of the importance of ability in reading comprehension for achievement in the field of general science. Rapid readers tended to exhibit high achievement in literary acquaintance, but relatively slow speed in reading simple material was characteristic of high achievement in science, mathematics, and Latin. The study suggests that there is lack of preparation in the abilities and the techniques of reading needed in the content subjects other than the literary.

The findings are clearly presented, and the conclusions seem appropriate to the data. One limitation is that the measurement of achievement by group tests in the different subjects involves ability to read the tests themselves, but this

<sup>1</sup> Eva Bond, *Reading and Ninth Grade Achievement*. Teachers College Contributions to Education, No. 756. New York: Teachers College, Columbia University, 1938. Pp. x+62. \$1.60.



limitation seems unavoidable. The only mechanical error noted occurs in the spelling of Booker's name in the Bibliography.

The study has obvious implications for both the objectives and the methods of teaching reading in the junior high school. There is need for studies of the same problem at other grade levels.

Educational Records Bureau  
New York City

ARTHUR E. TRAXLER

DRAMATICS FOR REMEDIAL READING AND FOR ITS OWN SAKE.—The present emphasis on remedial reading has an able ally in a recent volume by the directing supervisor of English in the junior and senior high schools of Cleveland.<sup>1</sup> Although reviewed here under the general heading of "dramatics," this volume is, in fact, a reader rather than a production source and, as such, is fitted for a class—whether in speech, dramatics, or English—rather than for a club or specific play production. A casual glance through the book brings the foregoing inference, and any doubt is dispelled by a reading of the author's clear, well-motivated, and practical notes "To the Teacher." The directions in this section have a brevity which is not the brevity of inadequate information but that of selectivity. "To the Teacher" implies a thought-out philosophy and a wealth of experience which place the author as an expert in his field.

The thirty-three brief scenes from well-known stories which make up the body of the book are, then, no haphazard collection of school plays but a purposeful selection of dramatic scenes to win children to reading for pleasure. Each scene is preceded by simple, pregnant suggestions to the pupils and to the teacher and is followed by questions and word lists. The scenes rise in length and difficulty on a carefully graded scale so that the volume can be used for pupils from, this reviewer would say, the eighth through the tenth grade. Memorized presentation with costumes and properties before an audience is possible with these dramatic scenes, but that is not their primary purpose; in the use of the book the author's warning that "the *doing* is much more important than the *having done*" (p. 410) should be kept in mind.

Lack of ostentation in *To Read and To Act* might tempt the casual reader to underrate its worth; its very simplicity is, however, one of the best guaranties of usability in the classroom.

Definitely in the "lifesaver" class is another book of dramatics,<sup>2</sup> with plays and instruction directly aimed at practical production. In this volume the teacher harassed by inexperience, overwork, lack of equipment, or by all three, will find a complete, self-sufficient dramatic library. It is the kind of book the pages of which will be dog-eared from constant reference.

<sup>1</sup> *To Read and To Act*. Scenes selected and edited by Clarence Stratton. New York: McGraw-Hill Book Co., Inc., 1938. Pp. xii+412. \$1.24.

<sup>2</sup> Robert W. Masters and Lillian Decker Masters, *The Curtain Rises: Plays To Produce*. Boston: D. C. Heath & Co., 1938. Pp. x+362. \$1.80.

Six plays are made available in the volume. Three are one act in length, and three are called "long" plays, although two of the latter are shortened versions of "As You Like It" and "She Stoops To Conquer." The other long play is "Convention Go Hang!" and the three short plays are "The Tarnished Witherspoons," "Christopher's 'Death,'" and "The Cue He Knew." The plays have been chosen with an eye to pleasing various types of audiences, although all may be classed as comedies. Perhaps the best way to indicate their scope and purpose is to quote the authors' description on the title-page: "A collection of non-royalty plays with complete production notes on staging, directing, and acting, designed especially for high-school and amateur dramatic groups."

The foregoing description is amply fulfilled in the book. Each play is accompanied by its own production notes, in which specific directions are given for making up the characters of the play, for building its scenery, for making its costumes (all illustrated), for securing properties, and for acting almost every line. The introductory section of the volume also has separate essays on the general aspects of all these phases of play production. Every word has been written from the practical outlook, even to the point of giving a day-by-day schedule of rehearsals, with exact information as to what should be done at each meeting and how long it should last.

So far as the reviewer is able to judge from merely reading them, these two volumes have no faults, and each in its field should be of inestimable value.

LOUIS TRAVERS

*Washington Junior High School  
Duluth, Minnesota*

**ECONOMICS THROUGH EVERYDAY PROBLEMS.**—At last a readable book<sup>1</sup> dealing with actual economic problems that young people meet every day is available for use in high-school classes of economics. Unfortunately the purpose of this book is concealed under a title which indicates that it has to do with vocations. Actually, however, the book deals with economics, not the abstract economic terms of consumer goods, wealth, distribution, and profit customarily found in college books in economics but practical economic problems that people face when they take out insurance, borrow money at the bank, or decide whether to rent or to buy a home. For many years high-school books in economics have been college textbooks with a simplified vocabulary but with the same theoretical, abstract approach. It is, therefore, refreshing to find a book that is intended to be of practical and immediate value to a person as he takes up his responsibilities as a wage-earner and a wage-spender.

Refreshing, too, is the manner in which these subjects are treated. After a problem is isolated and related to actual everyday living, the historical approach is used, and the present governmental agencies and laws operating in the area

<sup>1</sup> Clyde Beighey and Elmer E. Spanabel, *Economic and Business Opportunities*. Philadelphia: John C. Winston Co., 1938. Pp. viii+602. \$1.92.

are explained. Thus, in a discussion of what everyone should know about interest, the authors go back to the fourteenth century and trace the development of the belief that interest on money is justified. They then discuss factors that influence interest rates, the importance of credit in modern business, some of the abuses which have arisen, and the laws which attempt to control these abuses. Then—surprise of all surprises—they tie up this information with a presentation of the arithmetical computations involved in determining interest.

Similar treatment is given investments in stocks and bonds, taxes, the control of production, wage rates, employment of women and children, co-operative associations, high-pressure advertising, and consumer's buying. The use of pictorial graphs in the modern manner adds greatly to the attractiveness of the book, and the inclusion of mathematical materials makes it unusual.

Probably the weakest section of the volume is the last unit, "Choosing an Occupation." One suspects that this brief unit was an afterthought intended to increase the appeal of the book in a period that is "guidance conscious." However, the unit adds little to the value of the book, for the treatment of the subject is superficial and inadequate. Getting employment is certainly an economic problem, but it is not treated as an economic problem in this book. The treatment given it is, for the most part, a discussion of the distribution of workers; a disproportionately long account of government service as a career; and some paragraphs on the value of education, interspersed with well-worn generalizations and advice.

In spite of its title, this book does not discuss business opportunities, and it should not be classified as a book on guidance. However, it is a good book in economics, and it should be of great service in helping youth to gain an understanding of the economic conditions which affect their daily lives.

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BARBARA H. WRIGHT

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